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THOUGHTS ON TYPHOID FEVER.

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After one has been engaged in the practice of medicine for some years his views are considerably modified from teaching of earlier practice, not that teaching is erroneous, but modification to meet environment, individuality and particulars is necessary in each case. Therefore, in discussing typhoid fever, I shall give the observation of personal experience with deduction from various cases observed with discrimination as to individual temperament, activity, and intensity, time and quantity of poison generated and efforts made to obviate.

The successful practice of others present may counter my ideas, and I hope my paper may bring out their views. I know that many here can give varied experience as to methods which have stood them in good stead through very trying conditions under adverse circumstances. I do hope that anyone present who can may take issue with me to the end that liberal discussion may develop some exact, tangible scientific way of reliably treating this baffling pathological state. This is particularly directed towards our bright old Nestor, Dr. Sholl.

With those points in view, I shall proceed, with the assumption that the fundamentals, the anatomy, physiology, neurology, toxicology and other underlying principles are understood by this cultivated professional audience, rendering unnecessary, tedious quotations.

Let us waive etiology, pathology, clinical order and diagnosis, as every doctor of experience is conversant with those points, especially,

I hope, with diagnosis; the intention of this article being its plea to the doctor with some experience who can appreciate at value, discussion of measures usual in treatment of this disease. However, I will call attention briefly to some pathological features, knowledge of that state being essential to intelligent treatment. I wish to make one etiological suggestion, with pure water for general use the disease will disappear. We know the last four or five feet of small intestines is the common seat of lesions, though all the tract containing either, Peyers or solitary glands, can become involved, and pathological stages run about as follows: First week catarrhal hyperaemia of mucus membrane in the involved portion of intestinal tract; second week hyperaemia diminishes, but Peyers glands are on verge of ulcerating; third week ushers in ulcerative changes in the inflamed area with hemorages or resolution; fourth week curative and healing forces are asserting or the case becomes protracted. To sum up the stages briefly, first week we have hyperaemia, second week, hyperplasia; third week, ulceration; fourth week, resolution. Alluding to nausea, which nothing relieves, it is due to a congestive, degenerated condition of the peptic glands which interferes with the functional activity of stomach, intestines and mesenteries. I will not speak of changes which occur in the heart, liver and spleen especially, but they are all more or less involved, even the lungs show static congestion on posterior aspect. When you have fever which rises slightly higher each evening during first five days call it typhoid, whether you get lesions or not. Again, where you have a patient whose temperature runs 99 in the morning and 101 in the evening for several days you may term it a mild type, but do not be too sure that the third week will bring resolution, it may usher in serious changes and your patient may be dangerously ill for two weeks or more. Get patient in good condition during the first week with an initial purgative which is not too drastic and conserve forces as they may be required during the third week to tide over bad symptoms following the ulcerative stage, which are principally high temperature, hemorrhage, heart failure, exhaustion and sometimes perforation, or (inflamatory and degenerative changes may supervene in other structures instead of resolution.) The lungs are very likely to become involved, due possibly to lying on the back, which should be remembered in treatment so as to avoid it as a complication by changing the position frequently; or a bronchitis or pneumonia may result as an effect and give trouble. Complications of typhoid are the cause of much apprehension and danger. In every case the strife is between pathologic process, and vital resistance; and any help comes from in-

telligent aid to recuperative and resisting forces. You must have a clear conception of conditions which might arise calling for definite treatment and the adaptive judgment to apply a flexible course to meet requirement of individuality. No setfast rules can apply because of various modifiers and agents influencing diversity. As for treatment, there is no specific, and as all agents used sometimes fail to make any change in protracted cases, giving medicines, must be governed by symptoms, and then even the result is questionable. My armamentarium is usually limited by selection to spirits turpentine nitre, calomel, epsom salts, strichnine, and, where there is hemorage, the addition of digitalis, ergot, gallic and sulphuric acids by mouth, with alum and chloride of soda, or potas by high irrigation; WHERE complications exist, other remedies must be used. Let individual conditions govern, however, though upon general principles give very little medicine. Base a rational treatment of any disease upon the knowledge that each organ in health ought to take something out of the blood; IF it fails to do that work, you have as a result, a loss of relation and harmony from faulty excretion, with an irritation or fever or inflamatory process resulting, which is open to discrimination, and may be recognized as characteristic of some specific disease; THIS teaches conclusively, get your diagnosis correctly—DON'T go to a case and let the patient give a random account of vague symptoms, but examine carefully the heart, lungs, liver, kidneys, spleen, stomach, bowels, nervous system, brain and circulation, and, if necessary the urine, blood, saliva, bile and other secretions and excretions. Then you will be able to determine positively the character of the disease. After a thorough examination you will have no difficulty in adopting a line of treatment which ought to be successful. I risk tiring you with explicitness of suggestions on diagnosis, but as we are all prone to carelessness the question cannot be too frequently held up to the busy Doctor who so often overlooks important details in cursory examination, taking all else presumptively. The importance of early diagnosis means abstention from meddlesome medical mischief during the first week, which would result in serious consequences developed in the third week which early and wise conservatism would obviate; AVOID purgation with irritative purgatives or you will induce hemorages and exhaustion; WHERE there is nervousness or delirium give those remedies which will remove urea and carbonic acid from the blood, as Diuretics and Diaphoretics, and nourish them. The danger points to watch are too much medicine, starvation, high temperature and heart failure,

Avoid them all by careful feeding with meat juice, Albumin and milk properly prepared, conjointly with a limited, judicious medical course. Sulphite of sodium is an agent of much value in typhoid. It stays in the blood as sulphite at least ten hours and while harmless to the economy is very efficacious in destroying Bacilli and arresting fermentation; it is eventually excreted by the kidneys as a sulphate; I give it freely during the second and third weeks. The sulphites are legitimate experimental agents. They won't hurt man and will make blood and tissues an unhealthy location for any kind of germs or spores; while the ice-pack has advocates among the profession, I sometime ago retired from that class and have for several years advocated sponging with a slightly alkaline water and then rubbing surface well with alcohol, allowing quick evaporation and rapid temperature reduction by radiation, with no depression as may frequently be observed when using ice-packs. Wringing towels out of cool water to which alcohol has been added, and applying them thoroughly to surface, changing them often, will reliably reduce temperature and promote capillary changes. An ice cap to the head is all right and certainly does good. Where temperature is kept down with cool water and alcohol applications, you will not need the heart stimulants which are necessary when giving various internal antipyretics. If cold is used in selected cases with good capillarity then it is useful, but where it depresses it does positive harm, which must be obviated with stimulants. Sweet milk has seemed to aggravate the condition and make the disease run a longer period than when you practically eliminate it from your dietary. I do not mean to exclude cream but the curd forming matter, which, through fermentative decomposition produces disintegrated proteid compounds. These are acted on by the colonies of Bacilli resulting in formation of ptomaines and toxins which enter the circulation, aggravating the condition. Hence the value theoretically of directing treatment toward neutralizing those morbific principles, as a first means toward a cure. Beef and chicken soups or essences, albumin and cream are dietary which is highly nutritious, easily digested and assimilated, especially if a little pine apple juice be given. Use pine apple juice to flavor cream, albumin, or water, as it is grateful to taste, is nutritive, and supplies in some degree a digestive juice and antiseptic. Sometimes for several days there may be a reflex nausea emanating from centers controlling in the brain which absolutely nothing will relieve. I have applied mustard to the back of the neck and epigastrium, given pepsin, cherry laurel water, champagne, ginger ale, carbonated water and the entire category of applicable sedatives, yet it seems to me to wear out as quickly when let alone; though the laity

credit the last thing done with the quieting result. I have often felt chargrined at my inability to relieve nausea, but when you study the pathology of this disease, the reason why you can't control it becomes apparent; morbid changes in the alimentary tract, which are characteristic, excite and irritate the end organs of nerves distributed in that region, which initiative in turn is reflected to the brain and sympathetically excites centers stimulating nausea, as the morbid process of inflamation, ulceration, etc., extends over a period of two weeks or more, we have the reason why nothing will relieve until resolution is established and inflamation is superceded, when nausea subsides. As nothing done in the course of inflamation in many cases will obviate it entirely, attempts to relieve nausea are as futile as are struggles to cut short the fever. It seems to be a pathologic condition due to changes in absorptive glands. The agminated follicles, even the peptic and solitary glands, are involved in the peculiar degeneration of this disease. A principle to be borne in mind is to aim at prevention of ulceration and hemorage, which can usually be governed by some form of non-irritating purgation and antiseptics, or flushing the bowels with chloride irrigations, or giving a saline purgative and an intestinal antiseptic, conjointly. In my own practice I do not think so unfavorably of hemorrhages, having never lost a case where it occurred.

I have in mind a young man who had frightful hemorrhages which were checked with salt and weak alum irrigations, and sallic acid by mouth. After a rather free hemorrhage, the temperature, which had been running high, went down about three degrees; the salt irrigations were absorbed well and added to his comfort. I have never seen a case of perforation, the thought of which has been my bug-bear in treating this disease. I am convinced that flushing the bowels with antiseptics (not using much pressure), with an occasional dose of calomel, followed by oil, will lower blood pressure, keep the tract cleared of large colonies of germs, heal superficial ulcerated glands and prevent perforation. Nothing should be given as medicine or nourishment which would aggravate the ulcerated or congested area, otherwise you may have a very serious and complicated condition converted from a simple state. The starches should be avoided as diet. The hydrolysing glands are involved and cannot convert startches into nutritive product; therefore, it undergoes retrograde fermentation, forms ptomaines and bacilli culture pabulum, with aggravation of bad conditions, and consequent gravity following. Calomel has seemed least objectionable of the purgatives, given in small doses at intervals of about a week apart with salts or oil in interium. I treated the young man alluded to in a highly satisfactory way to patient and myself by

improvising a spray and giving him a shower bath several times daily there was a wire bottomed cot and rubber sheet in the house and a common flower sprinkling pot. We placed the rubber sheet over the cot, then rolled a sheet lengthwise and put it under each side of rubber sheet, making a trough, then elevated the head by putting fruit cans under the cot legs, pinned the lower end of sheet into a funnel; set a tub under to catch the waste, laid patient on it with nothing but a thin night shirt on; let nurse fill the pot, mount a chair by side of the cot and sprinkle him from head to foot, refilling with pitchers of water from an adjoining bath room, keeping up the process for ten or twenty minutes. As water was used at ordinary summer temperature there was no chill and the fever would aways decline. She would rub him off with alcohol, put a dry shirt on and put him to bed, when he would soon go to sleep, it being several hours usually before the measure would be required again. Where there are no conveniences for the sprinkling I obtain very good results from enveloping patients in wet towels wrung out of cool water, then sponging with alcohol, which by quick evaporative action extracts heat rapidly. Some cases are very much nauseated by the alcoholic scent. When such is fact, I add camphor, bay rum, cologne or other agent to disguise the alcohol odor. I had a patient two years ago who preferred pepermint odor. You can consult patient's preference usually for your alcohol application. Many cases are atypical and complicated with some pathological condition not dependent upon the typhoid bacillus alone for cause. We find frequently enteric, meningeal, pneumonic, bronchial and other inflammations accompanying and running conjointly. In such cases, symptomatic treatment must predominate. I had a case during December and January last which run a typical course of four weeks, when all bad symptoms were cleared up except a severe bronchial cough, and the accompanying stacis of posterior lungs. The patient was three miles out. I explained to parents that the condition would clear up and cough abate in a short while and as the bill was large I would cease my visits. Neighbors suggested that I ought to have continued visits until the cough stopped. The people concluded I was derelict and called one of our promising young physicians who was positive in his assertions, according to the father, that the child had never had typhoid but bronchitis, and that I had erred in my diagnosis and treatment. An atypical typhoid is the cause of much consultative disagreement, the one recognizing a meningitis, pneumonia, bronchitis or enteritis, the other recognizing an atypical condition. A good plan in such cases is to treat expectantly the symptoms most prominent and withhold any mention which might be misconstrued by the laity.

Each case must be a law unto itself, there being no policy which can be used invariably. Milk that has been churned so that the curds are thoroughly broken is one of the best nourishments. Buttermilk with cream added, if properly salted, and a little lime water is given, makes an ideal feeding. Ice cream is a good and most excellent food, that is frozen cream, and not the corn starch, proteid stuffs usually sold. Never allow ptomaines and catabolic poisons to multiply and aggravate the case by locking them up in the tissues with astringents. Where hemorrhage is profuse and an element of primary danger, use a heart sedative and a local astringent conjointly with alum and salt irrigations and you can control hemorrhage and obviate the danger which would result from arresting elimination of morbid products. This is the only stage of the disease where opium hypodermically will do good. I think it clear that arrest of excretion of tissue waste and other fermentations produce conditions of gravity which are puzzling and are manifested by extreme nervousness, hebetude, high temperature and pulse, abdominal pains, tympanites, etc. Opium in any form is a dangerous drug to give in typhoid generally, as it checks elimination and depresses activity of respiratory centers, though in hemorrhage it is a good agent. Where opium is usually advocated to quiet restlessness, I recognize a condition of physiological instability and give strichnine instead, thereby stimulating function to a higher plane, with increase of vital power; except where hemorrhage is threatened, when strichnine would do harm; then give chloral and whiskey. Recognize restlessness as a severe depression. I believe suprarenaline or adrenaline chloride useful in typhoid with delirium or hemorrhage, being typical vaso motor constrictors, and think there are many indications for their use, cardiac asthenia being one. I gave a young man 20 qtts. of a 1.1000 solution adrenaline chloride, diluted in one-half teaspoonful of water, hourly for three doses, then every three hours for a day afterwards, and while he had no more hemorrhages I do not consider it a fair test, as I used other measures conjointly. I shall give it a more thorough trial at next opportunity, as I have confidence in it. Of various internal medicines given, few have any virtue, and unless justified by some complication, which, unfortunately is usually present, you can dispense with medicine except possibly strychnine, turpentine, Epsom salts or oil and about once a week a calomel purge which, with the salines, lowers arterial tension. If you save the digestive tract for aliment and digestants of a properly selected character to meet requirement you act wisely. Please bear in mind, patients are more often damaged than benefited by promiscuous medication. Where you have delirium and dry tongue they are

starvation symptoms and nourishment alone is worth all else you can give. Turpentine is a direct heart and glandular stimulant and is antiseptic. I use it as the remedy above all other agents through the course of this disease. Where delirium is of a raving order with excitement, give wine of colchicum and veratrim viride cautiously. While turpentine seems to overcome the pathologic state by eliminating special toxic products and neutralizing or destroying the cause, yet proper nourishment is the sheet anchor in typhoid delirium. Certain cases require a great deal more than is outlined herein which must be credited to individuality and determined by the judgment of attending physician. I am very much prejudiced against the use of whiskey, though in the third week of typhoid where hemorrhage is imminent and a quick diffusable stimulant needed which will not increase blood pressure much, whiskey seems to meet the demand better than any other agent. I do not think as unfavorably of temperature as some. I recognize it as an agent of nature aiding in ridding system of morbid matter which cannot be removed in the usual way, owing to metamorphosis being interfered with by poisons of the condition. Fever consumes such waste material and if kept within bounds will not interfere with metabolism. The danger comes in allowing temperature to get high and become destructive to those delicate albuminoidal elements so essential to life. I make no attempt to offer invariable rules for success, but wish to say, in fevers or other wasting diseases each case will offer symptoms pecuiar to itself and must be treated upon merit. While attempting to alter the condition and restore normal relation do not lose sight of the fact that albuminoidal principles of the body undergo changes and are wasted in excess and must be supplied in excess, to counteract effect from physiological starvation. Therefore a nitrogenized albumin forming diet is a most important step in treating any wasting disease. Let us notice briefly the uses and need of albuminoids and their relation to life. Formless protoplasm from which cells arise is the first element of life that we have any comprehensive knowledge of. Analysis shows it to be albuminoid, therefore it stands to reason that any changes in these delicate elementary substances will be evidenced by a sharp and abrupt manifestation of some kind out of a normal line, showing disturbance of function for relation evidenced by disease of metabolic origin. We draw the conclusion therefrom that it is important to keep the albuminoids up to normal standard of quality, quantity, and maintain that quota full of the principles which manifest therein to keep life functioning upon a highly vital plane without impairment of force or vigor. Any alteration in character or potency results in disturbance of nutrition and

physiology of health. The tissues of these highly organized structures, the brain and nervous system are soon touched by the causes of the disturbance and impairment of forces and vigor are seen. Each dependent for healthy function upon maintenance of a normal amount of a good quality of the primal substance of life, albumin. Hence, in treating typhoid or any pathologic state supply a large amount of albumin-forming material, which means in the end the nourishment of every principle of force and strength and should bring the success you wish to have crown your efforts. We admit the necessity of a medical antidote and preventive, but the fact confronts us we have none of any invariable reliability, yet I believe the time will come when a specific will be developed from investigation and research now moving in scientific circles. At present a general hygienic dietetic antibacterial and propylatic treatment is all that can be intelligently applied. As the disease is usually complicated with some accompanying pathologic condition we can scientifically do a great deal in a medical way by relieving the states produced by complicating addenda which aids materially yet would have no influence if complications did not exist.

These thoughts are given as they have occurred to mind and are intended to act suggestively upon those who may feel an interest in a very common and troublesome disease. I claim no "cinch" for any course of treatment and treat no two cases alike and conclude that nursing and nourishment are more valuable when properly given than any medical course yet proposed. Knowing the cause finds propagating place in the intestinal tract, the principal aim of any logical treatment should be directed toward that location. Hence, intestinal antisepsis, theoretically ought to occupy a most important place in any plan of treatment.

Practically the only good I have observed from internal medication in an uncomplicated case has been from agents directed toward removal of bacilli, and soothing irritable mucus membrane. I believe that future typhoid treatment will be based upon early diagnosis and prevention of ulceration of agminated glands by thorough irrigation of the infected area with some non-irritating antiseptic which would reliably kill bacilli, removing the causing factor and yet not injuring mucus membrane. Such course would cut short the time and severity of the disease and eliminate dangerous features. Make it a fixed rule to give nothing which could depress or check excretion of waste, or elimination of toxic products, or lock up morbid matter in the tissues. Give nothing which could irritate or further excite the hyperaemic condition of alimentary canal. Give nothing which would tend to limit oxidation or impair haemogenic conditions. Give nothing which

could impair brain function or force continuing centres. Simply help and augment the powers of resistance and continuance till time can limit the onslaught and resolution end the attack.

I feel very loyal toward my profession. I think it a great and noble calling and hope I will not be misunderstood when I say that among the best of all means in typhoid is a good trained nurse, and an alkaline water. I use preferably Ingram Lithia water, it having many points to recommend it, especially to the local profession. It is a domestic water from our own State. Analysis shows it to be a pure water, being especially free from germ and toxic impurities. It is a soft water and has a good per centage of wholesome alkalinizing principles. It is so light and highly hydrogenized, it can be drank in large quantities, solving acids and crystaline principles, eliminating them directly through urinary apparatus, and ridding the blood and tissues of irritating morbid elements. It seems to have a splendid influence over the excretion and neutralization of principles which if retained excites continuance of pathologic processes. It comes in well stoppered bottles conveniently arranged for use. When the bottles are kept on ice, it is palatable. In fevers we have hyperacidity to contend with and a properly selected alkaline water is a valuable aid to treatment. Ingram water, being a home water, we can get it in a fresh and sparkling state; drank freely, it flushes out the sewers of the body and eliminates decomposing matter which must be gotten rid of ere it does irreparable mischief.

Watch complications, and counter them promptly with treatment, and unless the typhoid invasion be of unusual virulence, nature will take care of and limit the duration of an attack to its earliest period of defervescence. No statistics accumulated offer reliable data for guidance. Of course there are enthusiasts who advocate hobbies and sure cures, but statistics show best results from an expectant plan of treatment.

ENEMAS IN THE TREATMENT OF FEVERS.

By Hugh Boyd, M. D.

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Enemas have been used for many years in the treatment of fevers; but it has been only in recent times that they have been used for any purpose other than relieving a full Colon of its contents.

I shall deal with the hot and cold enema and shall confine my remarks mostly to typhoid fever and pneumonia.

We are all acquainted with the good effects desired from a warm

evacuating enema in a child who is having convulsions from a malarial fever and from a fever due to digestive disorders, when the liver is inactive, the bowels constipated and the colon full of feces.

In intermittent malarial fevers the warm enema shortens the fibrile stage and hastens the sweating stage. It has never failed in my hands to quiet and produce sleep in a child suffering from this disease. Convulsions are controlled, fever is reduced, and sleep is produced. In remittent and pernicious malarial fevers it also acts well, especially in the latter. If one is passed another should be given in smaller amount with the colon tube. Given in this way it is an excellent stimulant and diuretic, lessening concentration of the poisoned blood and relieving to some extent the strain on the internal organs, especially the kidneys. It also has its place in the treatment of the acute exanthemata; but the principles laid down under typhoid fever and pneumonia can be applied to them with some changes suitable to the case and condition.

The cool or cold enema is composed of water with a temperature of from 60 to 90 degrees, and warm from 99 to 105 degrees—the temperature and amount being regulated by the condition of the patient, the effect we wish and the purposes it is to serve.

The cool enema serves all the purposes of the bath and more without possessing some of its disagreeable qualities. It reduces the fever, slows and regulates the heart, but slightly weakens the pulse-beat, slows and deepens respiration, quiets the nervous system, relieves delirium and produces sleep, furnishes water to the system and relieves thirst, flushes the kidneys, cleanses the bowell and thereby relieves the system of toxic products. Whether it has any effect on the blood other than lessening the concentration of its poisons, I do not know.

It is indicated in typhoid fever in adynomic cases where an antipyretic is needed, where the bath or sponge is borne badly and shocks the patient, when there is likelihood of pneumonia, congestion—when the kidneys act badly and sufficient water will not be taken by the mouth.

The hot or warm enema is used for its cleansing and evacuating effect on the bowel, for its stimulating effect in hemorrhage and to supply the lost blood—for its effect on the kidneys and as a menstrum for nourishment.

In those cases of typhoid fever in which we have kept the bowels from moving for two or three days, fearing hemorrhage, and we wish to relieve them without disturbing the upper bowel, there is nothing that will take its place. In these cases give a warm saline enema gently and let it pass away with the bowel contents. In three or four

hours give another, say about one and a half pints, with a catheter and let it remain, and the patient's condition will improve. In case of hemorrhage, a warm saline enema of six to twelve ounces every one, two or three hours, combined with opium by the mouth or skin (hyperdermically) and turpentine by the stomach will do no good. It will relieve the shock and bring back the temperature. A pulse that was 150 and weak and thready before its administration will become under its use slower, fuller and stronger. The patient revives and a life is saved. When the kidneys do not act enough and the urine becomes highly colored and loaded with urates and containing albumen, and in those few cases that refuse to take sufficient water by the mouth, it acts well. Given in from one to two pint quantities from one to three times a day and retained, the kidneys act better, the urine is clearer, and the patient is benefited.

Again in those very severe cases that cannot or will not take nourishment, where they lay for hours in one position, may be in a muttering delirium or picking at the bed clothes, when life hangs by a very weak thread, this enema serves us again as a good menstrum. In these cases one or two tablespoonfuls of some peptonoid preparation in four to six ounces of warm saline solution put into the colon by a catheter every three or four hours will nourish a patient for several days. It is just in these cases too that we need the stimulating effects of the saline solution. We know that in these cases and in hemorrhage, the saline solution by the skin or vein is the best stimulant we have. Then why will it not be a a stimulant still when taken into the blood from the bowel even though its absorption is slower, And if it is objected that it is not so prompt and somewhat uncertain, it has the advantage of being readily and easily given and that every doctor is always prepared to give it.

It is rarely necessary to resort to an antipyretic in typhoid fever before the eight or tenth day, except in those cases that have a high temperature from the beginning. If I fail to bring about some reduction of temperature in three or four days with quinine and saly. soda, I begin to give two to three cold sponges a day aided by one to three cool enemas, depending on the fever and the condition of the patient. Under this treatment the fever continues very much the same until tenth or twelfth day, when it becomes lower and breaks from the fifteenth to the twentieth day—usually about the sixteenth day. In those running the usual course, however, it is necessary to do something for the fever about the tenth day. Let me say in this connection that the fever is not always the greatest thing that concerns us in

typhoid fever and pneumonia, but sometimes is of minor consequence. A morning temperature in typhoid fever of 102 and 102 1-2 degrees, and an evening temperature of 103 degrees needs no treatment. A temperature of 103 1-2 and 104 degrees in pneumonia usually needs none. But unfortunately there are few that run this course. When the morning temperature becomes 103 and 104 degrees and the evening temperature 103 1-2 and more, we must use an antipyretic. Water in some form is recognized as the best, and I believe it is the only antipyretic we should use in those diseases. The hot bath has not reduced my typhoid and pneumonia fevers very much. It may be that I have not used it correctly, or that I have not used enough of it; but the only effect I have been able to observe other than a slight reduction in temperature has been a quieting of the nervous system. Unfortunately too, all our patients cannot take the cold bath or the cold sponge. Some are asthmic, some cases are adynomic and do not rally from the shock. Some it predisposes to hemorrhage, and some to pulmonary congestion. It has been in these cases that the cool enema has served me so well, and I have used it to the exclusion of everything else found it quick enough to keep the temperature down and the patient comfortable. I use in these cases from one to four and five a day, depending on the condition of the patient and the symptoms calling for it; and I have never yet observed a single bad effect, and have seen no symptoms of cerebral anemia or any other that would point to a too watery blood. Text books advise us to give five and six quarts of water a day by the mouth. Why not give it by the rectum also?

I lean favorably to the cold baths and sponging, but I am beginning to like the cool enemas as well, because they serve more purposes, are easier to administer, do not worry the patient as much, can be used in asthmic subjects and adynomic cases, and in my experience do not predispose to hemorrhage or pulmonary congestion. When it can be done, I use both. If the morning temperature is about 103 degrees and the evening temperature more, I have given a cold sponge or a cool enema about ten or eleven o'clock, a cold sponge about three or four, and a cool enema at bedtime. Of course if the temperature runs high and rises rapidly after each reduction, we do not wait so long to reduce it. Every case is studied to itself and treated as it deserves.

About twenty to thirty minutes before each enema whiskey is given in the proper amount for the patient. A fountain syringe is filled with one and a half quarts or normal salt solution at a temperature of about eighty degrees. Usually only a rectal tube is used, but when the

bowel is intolerant a No. 14 Eng. catheter or colon tube is passed well beyond the sigmoid flexture; the syrings is held about a foot or so above the patient and the solution allowed to run slowly, checking it for a minute or so at a time until one and a half, two or three pints are used, depending on the effect you wish. The water is soon heated and is passed away in ten, twenty, forty or sixty minutes or not at all and is absorbed. Given in this way, the bowel becomes tolerant and retains the water remarkably well. In fifteen to thirty minutes the temperature drops from one and a half to two and a half degrees and remains so for two or three hours, when it gradually rises. Of course if you use very cold water and a great quantity of it, and quickly, the temperature will drop more and there will be shock. But common sense tells us not to do this. We must use our judgment in the use of these enemas. If one is passed immediately and the patient needs another in an hour for his fever or nervous system, give it to him high up in small quantity and he will likely retain it.

After using two or three enemas a day with or without the sponging for two or three days, the temperature in the evenings of the second and third day after beginning their use will be higher even though it has been running the same before hand, but usually it will respond better to treatment than at the beginning. In my observation this is common, and I believe it shows an increased resistance on the part of the patient to the disease. After four or five days the temperature does not go so high in the evening, and even if it does the morning temperature almost always shows a decided decrease, as much as one-half to two and a half degrees, and when the fever once begins to break it is not long in leaving altogether.

I have recently had three severe cases of typhoid—all males aged 14, 19 and 21 years—all asthmic subjects, all doing well until the sixteenth to the twentieth day, when from errors in diet and shocks to the nervous system the morning temperature began to run 104 and 105 degrees and the evening 105 and 106 degrees, and continued at this hight for several days, until relieved temporarily by the cool enemas. They could not take the cold sponge because of the shock it produced—one was shocked too much by it and had two large hemorrhages later. The hot sponging and baths had no appreciable effect on the fever and worried the patients too much. Late in the disease I began to use from two to four cool enemas a day. A cool enema of from one to three pints was given every three to eight hours, as it was necessary to keep the temperature below 103 degrees and quiet the nervous system and, while it was doing this, it was also combatting and eliminating the toxines of the disease. Usually on the evening of the second or

third day the temperature was higher; on the morning of the third or fourth day it was lower, and continued to be lower in the morning, while the evening temperature was lower after the third or fourth day. And in these severe cases in which the enemas were used, when the fever began to leave it did so so rapidly as to leave almost by crisis.

The principles underlying the use of the enemas in pneumonia are virtually the same as in typhoid fever. In this disease, with a fairly good constitution, I do not look upon a temperature of 103 1-2 degrees as high, and so long as it goes no higher I rarely ever disturb it unless there is some special indication for doing so, in which case, and when the temperature is higher, I resort to water in some way. With children I prefer the warm bath gradually made cold; but with adults I like the enemas as well or better, and with children I usually use both.

In very severe pneumonia, where the temperature runs 106 to 107 1-2 degrees it is necessary to use antipyretic every two, three or four hours. It has been mostly in children that I have seen these high temperatures, and then I use the bath and enema as the symptoms demand it. The baths are used more, but the enemas are given in from three to six in twenty-four hours. Besides reducing the temperature and having the effect on the whole system that this produces, this method seems to combat the toxicity of the disease. After the use of the baths and enemas for twenty-four hours, the temperature generally gets higher and rises rapidly after their administration, but the temperature responds better to the water than at the beginning. And again the nervous system is clearer and the circulation better with the same temperature than they were before these were begun, especially the enemas. On the third day the temperature almost always shows a decided reduction and continues to be lower until the crisis. And again, after persisting in this treatment for two, three or four days, I have failed to notice any distinct crisis.

I have heard it said that as long as the kidneys act well, no pneumonia is hopeless. The enemas, especially the warm, will help to keep the kidneys acting well, besides other purposes they serve, which have been mentioned above. And sometimes it is better to disregard the fever and give a warm saline enema for its effect on the kidneys and blood. Suppose we have a man in the seventh, eighth or ninth day of croupous pneumonia, in whom the nervous system is full to overflowing, the right lung is distended and laboring, the second pneumonic sound muffled. Shall we give him aconite or veratrium and "bleed him into his own vessels," or shall we give him digitallis and stimulate that heart which is doing all it can with the blood that is in it? No; the sensible, the rational way to deal with this condition is to bleed

him about one and a half pints; give small doses of mercury as a vasso-dilator, and give a warm saline enema and then your digitallis. And if the patient is not too near dead it will relieve him.

In the first and the beginning of the second stage of pneumonia, in a robust patient, I have performed venesection and administered a warm, saline enema, and I am convinced that this treatment helped my patients and lessened the virulency of the disease.

Not long ago I saw a baby five months old with an acute catarrhal pneumonia diffused through both lungs. It began with a cough and cold on Monday; had fever on Tuesday and Wednesday; saw it on Thursday when the diagnosis was made. Temperature 103; circulation 160; respiration 68. It was given an initial dose of calomel and as the parents lived some distance in the country they were instructed to bring it to town. Saw it on Friday night. Temperature 104; circulation 175; respiration 70. During the night it was given two warm baths. At seven a. m. Saturday the temperature was 105, and a cool enema was given. At ten a. m. temperature was 105 1-2, and another enema; twelve m. temperature 105, cool bath; two p. m. temperature 106, cool enema; five p. m. temperature 107 1-2, cool bath. Water was taken from a well and the child was put into it and kept there for ten minutes. The pulse was too fast to count, but twenty minutes after it was taken out it was 135, and temperature 101 degrees. At 7:30 p. m. temperature 105 1-2, and cool bath; ten p. m. temperature 105 and cool enema; one a. m. Sunday, temperature 105 and cool enema; at 7:30 a. m. temperature 103 1-2, pulse 155, and never went any higher. The fever left on Tuesday. This child did not get a dose of medicine in all this time except the calomel and two small doses of quinine, because it did not need it. While the temperature was around 105 and 105 1-2, the pulse ran about 175 to 190. If this child had not received these baths and enemas it would have died. If it had received medicine to reduce the temperature it would have died. On Sunday, though its temperature was never over 103 1-2 and became less in the evening and night, it was very nervous and was given the comp. tr. opii and bromide of potash every two hours until it was controlled.

A great deal more can be said in behalf of the enemas in the treatment of typhoid fever and pneumonia. I have merely given an outline of their indications and uses. And while I am far from claiming for them the place of a sine qua non, I insist that they have their indications; that there are conditions and symptoms that demand their use; that there are some patients who bear them better than water in any form, and when used judiciously that they are devoid of danger. Do

not understand me to say that I want them to supplant the baths and spongings, for I do not. But I wish them to help the baths; I wish them to be used when the baths can't be, when they worry or shock the patients too much, and when the baths are contraindicated. I wish them to be used as stimulants, evacuants, antipyretics and diuretics at the discretion of the attending physician.

A REPORT OF A CASE.

By M. N. Due, A. M., M. D.

BIRMINGHAM, ALA.

Read before the Jefferson County Medical Society.

Mr. President and Gentlemen:

I wish to call your attention to a case that in some respects is remarkable, and it certainly is unusual in its happy result.

A child two years of age on last Friday at 1 p. m. swallowed a hat pin, by actual measurement just two and one quarter inches long, sharp at one end and tipped with a glass knob about the size of a pea at the other. The mother's attention was immediately called to the child and realizing what had happened, she ran her finger down the child's throat in an endeavor to make him vomit. Instead of vomiting the pin evidently passed into his stomach. The mother was greatly alarmed, but after watching for a while the child gave no symptoms of any trouble, she did not send for a physician but allowed the child to eat his ordinary diet, and particularly gave him bananas and bread; she informed her neighbors about what had happened but they almost discredited her, so well was the child doing.

On Saturday—the next day—the child complained of a sticking pain in the region of his stomach, which soon passed off. He rested well until Sunday when he complained of the same feeling in the left hypogastric region. All Sunday night he was restless but did not complain of pain, nor did he cry out. This (Monday) morning the pin was passed with his usual morning action. There was no blood, and no symptom of any kind to indicate that the pin did not have an uninterrupted passage through the alimentary canal, except the slight pains mentioned which occurred on Saturday and Sunday.

The remarkable part about the case is that no cathartic nor aperient of any kind was given and there was no medical or surgical interference.

CHRONIC INTERSTITIAL NEPHRITIS IN THE YOUNG.

Jose L. Hirsh.

This condition of the kidney, while very common in old age, is rather rare in the young, a fact which is readily explicable when we consider the cause of same. Most common among them is gout, chronic lead

poisoning, alcoholism, overfeeding, syphilis, and diabetes mellitus, conditions acting slowly and for the greater part with adult life. The relation of arteriosclerosis and kidney disease is still uncertain; either may be primary to the other. While in adults the proportion of cases of chronic interstitial nephritis in males to females is 2 to 1, the writer has found that in children a larger number of females than males are affected. There are not more than 30 cases of this type of nephritis in children reported in which an autopsy has confirmed the clinical diagnosis. The literature on the subject is reviewed in some detail, and the writer reports two cases of contracted kidney in the young, both associated with alterations in the blood-vessels, though of an entirely different uature:

Case I. A white boy, aged 15 years, who entered the hospital on account of uncontrollable hemorrhage of the gums. This was soon relieved, and further examination showed a hypertrophied heart with a marked accentuation of the second aortic. Urinary examination showed a small amount of albumen, a few granular and hyaline casts, specific gravity 1012, and an increased amount of urine. Death followed in five weeks. Autopsy showed typical granulated kidneys, the left weighing 68 grams and the right 80 grams. The aorta was decidedly atheromatous throughout, a condition which is comparatively rare at this time of life.

Case II. A white girl, aged 18 years, complained of frequent urination and inability to control her bladder. Physical examination showed some anasarca of the lower extremities and enlarged heart. The urine was increased in quantity; specific gravity 1010; small amount of albumen; no sugar; granular and hyaline casts.

Autopsy 12 hours after death. The heart was somewhat enlarged; the kindeys were extremely small—in fact, probably the smallest recorded in this condition. The right kidney measured 5x2.5x2 cm. and weighed 18 grams; the left measured 4.5x3x1.5 cm. and weighed 22 grams. Both macroscopically and microscopically the lesions were those of an advanced chronic interstitial nephritis.

The aorta was abnormally small; at its origin it measured 4.8 cm. Throughout its entire extent it admitted the little finger with considerable difficulty. There were no evidences of atheroma. The relationship between congenital narrowness of the aorta and the arterial system and primary atrophy of the kidney has been noted by several French authors.

A table giving the size and weight of cases of reported primary contraction of the kidney in the young is appended.—Journal of American Medical Sciences, June, 1904.

Selected Articles.

AMEBIC DYSENTERY—ITS LOCAL LESIONS AND TREATMENT.*

By James P. Tuttle, M. D.

Professor of Rectal Surgery, New York Polyclinic, New York City.

Our views of dysentery have greatly altered since the days when we considered it "inflammation of the bowels" without knowing exactly what it meant by the term inflammation. These changes of views are the result of pathologic studies and are in line with the great changes made in our views of surgical etiology and pathology.

With regard to dysentery they began in the discovery by Losch of the ameba coli, and the association of this germ with the disease by Councilman and Lafleur; for a while after this the profession accepted that ameba coli, afterward called "Amoeba dysenterioe," as the established cause of the disease. In 1894 and 1895 the reports of Shiga, Flexner, Harris and others, seemed to establish the fact that at least in the epidemics of Japan and the Philippines the ameba was not always present, but there was a bacillus of a peculiar type universally present and to this they gave the name Bacillus dysenterioe and established its etiologic relations to that form of the disease.

After this various efforts were made to establish the unity of dysenteries and to prove that this bacillus was the only cause; that the presence of amebae in dysentery was accidental. Clinical observations, however, have failed to justify such sweeping conclusions. The best authorities have finally concluded that not only are there cases of pure bacillary dysentery and cases of pure amebic dysentery, but there are also cases at least with the typical symptoms of dysentery in which neither the bacillus nor the ameba can be found. We therefore recognize these three types: simple catarrhal dysentery, bacillic dysentery and amebic dysentery.

It is to this last form of the disease that I wish to direct attention. What I have to say is based on personal experience of seventy-four cases of amebic dysentery, together with what knowledge I may have

*Read at the Fifty-fifth Annual Session of the American Medical Association in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank Jones and W. S. Thayer.

gained from reading. In every case observed, with the exception of one, the diagnosis has been made on the finding of living motile Amoeboe dysentery in the stools or scrapings. To some it has seemed a presumption to look on the amebae as the cause of ulcers and dysentery, but the fact that they are present with other pathogenic agents in all cases, and the fact that the dyseneric symptoms and local lesions disappear only when the amebae have been eradicated and recur when the amebae reappear is positive proof, it seems to me, of their etiologic influence in this disease. I, therefore, assume that amebic dysentery has been proved and we may proceed to consider its cause, its symptoms, its local lesions and its treatment.

ETIOLOGY.

The cause of the disease is the infection or invasion of the colon by Amoeboe dysentery. These amebae consist of irregular oval masses of plasmodium, gelatinous in their appearance, scarcely visible when not moving, containing in their beds certain granular masses or vacuoles and appearing to be more or less refractile. They may be found in the mucus which is discharged in the stools, as well as in the scrapings from the ulcers in the rectum and sigmoid. Their source is unknown, nor is there any accepted theory with regard to it. The behavior of amebae found in dysentery differs greatly from that of those found in fresh water, when exposed to heat or cold; it is this point alone that positively distinguishes the two. The latter remain motile at high and low degrees while the former are viable only at temperatures near that of the human body. Some have claimed that there was a difference in size, but my observation does not justify such an opinion, as the size of the amebae varies greatly in different cases and even in the same case.

METHOD OF REPRODUCTION.

As to the method of production: It was formerly supposed that amebae multiplied by biniary division, after the manner of leucocytes in the blood. According to Craig of the United States Army, Dofflein and others, it is now claimed this reproduction occurs through ovulation and sporulation; the spots in the amebae which stain deep blue with Wright's solution represent spores, and those that stain very faintly the vacuoles from which spores have been discharged. There is one point in Craig's experiments in which an assumption is necessary, viz., that the bodies observed stained are the same as those observed in the living state before the staining, for it is impossible to stain and preserve the

amebae motile. In fact, one can hardly positively distinguish non-motile amebae from other substances in the stools. If, however, this assumption is admitted, the methods of reproduction by sporulation would seem fairly well established, and it is confirmed by the clinical experience of recurrences long after the motile amebae have entirely disappeared from the stools.

TEMPERATURE AND OTHER CONDITIONS AFFECTING THE AMEBA.

The fact that we have been unable to isolate or obtain a pure culture of this ameba renders its study more difficult than that of ordinary pathogenic agents. Its behavior, however, under certain circumstances has been observed clinically, and from this we may formulate some of its characteristics. At the temperature of the body, or slightly higher, the life of the ameba is indefinite; if, however, the temperature of the vessel in which it is obtained gets below that of 70 degrees F., the motility and life of the ameba becomes extinct and no amount of heat will restore the same.

Bichlorid of mercury 1-1,000, at the temperature of the body, checks the motility but does not destroy it except after very prolonged contact. Rogers states that a solution of quinin 1-1,000, at the temperature of the body, failed to destroy the amebae after several hours' contact, but that a 1-500 solution stopped all movements in from five to fifteen minutes; when the amebae were in the tissues, however, they were only destroyed by prolonged soaking in 1-500 or 1-100 solution of quinin. Saline solutions at the temperature of the body will not destroy the motility. According to Harris of Atlanta, peroxid of hydrogen is fatal to the germ. He does not state, however, whether this fluid was used cold or warm. Five per cent. of the 15 volume peroxid of hydrogen in water, however, does not seem to destroy the amebae at a temperature of the body. Nitrate of silver in 1 per cent. solution checks the motility but does not seem to destroy the germ. All these solutions, however, when used at a temperature below 70 degrees, are fatal to the motility and life of the amebae. In at least twelve of the cases which have been under my care the stools had been examined in vain for amebae before they came to me. In very instance the failure to find the bodies has been due to the fact that the stools were examined after they had cooled off. In order to recognize the amebae with any certainty the examination must be made while the stools are still warm and on warm slides. In my office these examinations are made from scrapings obtained from ulcers in the rectum and from the mucus

collected on the rectal walls. These are placed at once on warm slides, put under a microscope and slightly heated now and then in order to maintain the temperature at about 98 degrees F. In the hospital or laboratory the stools are collected in warm pans, transferred immediately to the oven of the laboratory and kept there until an examination can be made at the temperature of the human body. These precautions are absolutely necessary to make an accurate diagnosis.

CHARACTERISTICS OF THE DISEASE.

Amebic dysentery is characterized by an insidious onset, variable but usually mild constitutional symptoms, frequent recurrences, extreme chronicity and latent existence. It may begin as an acute diarrhea, with blood and mucus in the stools and burning in the rectum, or it may come on as a simple looseness of the bowels, some of the stools being practically normal while others are thin and contain much mucus, with or without blood, and causing little or no pain. The acute cases are associated with burning in the rectum and frequent desire to defecate, loss of appetite, and slight elevation of temperature. The stools may be very frequent; the demand to defecate is imperative, but they are not associated with tormina or excessive burning in the rectum. In most instances castor oil or salines, followed by moderate doses of opium and bismuth, control the disease for the time being. In two instances in the series of cases observed periods of quiescense lasting for six months in one and four months in the other have been observed. We must make some allowances with regard to the statements of these patients regarding these periods of absolute quiescence, for they are only periods of comparative activity of the amebae. In a few instances the patients have actually become constipated during these periods, but such cases are exceptionally rare. In almost every instance the patients have reported periods of feeling greatly improved at times, but when we have carefully pinned them down to the facts these patients have considered themselves practically well when they were having two to four mucous stools a day without any pain.

LATENT DYSENTERY.

By latent dysentery we refer to the condition in which Amoeboe dysenterioe are present in the intestine, without the diarrheal symptoms or the local manifestations in the form of rectal and sigmoidal ulcers. Rogers has established this fact, and I have myself observed four cases in which there was no diarrhoea and yet there was amebic colitis with malaise, loss of flesh and strength and moderate temperature at night.

One of these cases suffered from abscess of the liver, which recurred from time to time and which was operated on twice in five years. He could not recall ever having had a diarrhea. He was referred to me with the view of discovering some cause for these recurring abscesses of the liver in possible ulcers in the rectum and infection from these through the portal circulation. No ulcers were found in the rectum, but certain small cicatrices and some fetid mucus suggested a careful examination of the stools; these we found swarming with Amoeboe dysenterioe. Two other cases with tenderness over the catput coli, loss of appetite and gradual decline in weight, mucous colitis no diarrhea, have been observed, in each of which the stools contained Amoeboe dysenterioe in abundance. In one of these amebic ulcers were found in the rectum, and in the other two small ulcers were observed in the sigmoid. The fact, therefore, that thepatient does not have frequent, bloody, mucous stools does not prove that he is absolutely free from Amoeboe dysenterioe. From cases recently observed, I am inclined to believe that no inconsiderable number of the sufferers from mucous colitis are the victims of amebic infection notwithstanding the absence of diarrhea.

GEOGRAPHICAL DISTRIBUTION OF THE DISEASE.

The locations in which amebic dysentery is likely to be found are worthy of consideration. Formerly the disease was called "tropical dysentery" under the false impression that it was only found in the tropical zones. While it is a fact that it is more frequently found in warm climates, yet it is well known that it may also occur in almost any climate. I have seen three cases of acute amebic dysentery in patients who have never been more than fifty miles south of New York and fifteen cases in which the patients have always resided above the thirty-seventh degree of latitude. The majority of the seventy-four cases observed, however, have contracted the disease in the Philippines, the West Indies and the extreme southern portions of the United States. The possibility of amebic dysentery can not, therefore, be eliminated on account of the patient's residence. The disease is nearly always sporadic in the tropical zones, and may thus be distinguished clinically from bacillary dysentery, which is generally epidemic.

LOCAL LESIONS OF AMEBIC DYSENTERY.

The local lesions occurring in amebic dysentery differ in the acute and chronic forms. The disease is practically confined to the colon,

although there are instances in which the small intestine has been involved for a short distance above the ileocecal valve. In some cases the disease begins in the rectum and travels upward, while in others it follows the reverse course. Rogers and Futcher state that the typical cases of infection begin in the caput coli and travel down. At all events the rectum and sigmoid flexure become involved sooner or later in almost every case. In the three acute cases observed the mucous membrane at the anus was pouting, bright red and swollen, the radial folds were edematous and painful; the walls of the rectum were in close apposition with each other, hot and tender to the touch, bright red in appearance and in one case there were several patches of pseudo-membrane. At this tage of the disease no actual ulcerations were observed, but later on these developed. These ulcers were irregularly oval in shape with gelatinous, yellowish, elevated centers, surrounded by bright red or purplish zones. They are usually superficial and heal rapidly under local treatment.

In the chronic form the ulcers begin as small red papules on the mucous membrane, rapidly becoming more and more prominent until a yellow spot develops in the center, due to the loss of epithelium, and this constitutes the center of the ulcer. I have frequently seen these in chronic cases of amebic dysentery, but did not observe them in either of the acute cases examined. The ulcers are usually situated on the summits of the mucous folds; a favorite site is on the folds of Houston. The size and shape of the ulcers vary greatly; some are small and irregularly oval, while others occupy almost the entire circumference of the gut. The long axis of the ulcer is usually at right angles with the long axis of the gut.

In very chronic cases the ulcers sometimes assume the form of little troughs cut out of mucous membrane with overhanging edges which resemble very much wormholes in wood. These trough-like ulcers sometimes cross one another, forming stellate ulcers. In this type of ulcer the base is hard and quite red and may extend through the muscular layer to the peritoneal layer, causing adhesions. The yellow gelatinous mass which forms the center of the ulcer is composed of submuscosa infiltrated with Ameoboe dysentery. Strange as it may seem, the amebae are more abundantly found in the smaller ulcerations than in the large. In some cases large sloughs composed of detached shreds of mucous membrane are seen at the site of the ulcer or in the stools. Rogers has pointed out that these cases are generally associated with abscess of the liver which contain streptococci in addition to amebae, thus showing a mixed infection. As pointed out by him, the odor in these cases is gangrenous and fetid, which is entirely unlike

that found in amebic dysentery. One might here call attention to the peculiar odor of the stools in amebic dysentery, which is entirely different from that observed in other types of colitis. As the ulcers heal the yellow centers melt away, assume a grayish tint and gradually disappear, leaving a clean granular base more or less indurated; the small ulcers heal rapidly and all evidence of their having been present is lost; the larger ones, however, and the trough-shaped variety leave cicatrices which have been known to result in stricutures of the gut.

DISTRIBUTION OF THE LESIONS.

While all writers agree with the general statement that amebic dysentery is practically confined to the colon, there is considerable difference between them in regard to the portion of this organ most frequently affected. Futcher and Rogers state that the cecum, appendix, hepatic flexure and ascending colon are the chief sites of the lesions. In 116 cases Futcher rarely, if ever, found the lesions in the rectum and sigmoid. These statements are entirely at variance with my experience, as well as that of Strong, Leonard, Craig and others. In the seventy-four cases of amebic dysentery observed by me, typical ulcers of the rectum and sigmoid were found in seventy instances. In every case except one the character of the lesions was proved by the demonstration of living motile amebae in the stools and scrapings from the ulcers. Fletcher himself, although he claims that the chief seat of the disease is in the cecum, bases his diagnosis on the finding of Amoeboe dysenterioe in scrappings from the rectal wall.

Why these experiences should differ it is impossible to say unless it be due to the fact that my observations have all been made, with one exception, on living subjects, while those of the authors quoted were made postmortem. The one patient who died while under my care from acute miliary tuberculosis showed dysenteric ulcers in the caput coli and in the ileum just above the ileocecal valve. It is possible, of course, that the other case had ulcers so high up in the intestinal canal that it was impossible to observe them through the sigmoidoscope. In the majority of instances, the ulcers appeared to decrease in size and number from the rectum upward until they disappeared entirely in the upper portion of the sigmoid flexure, and as the patients entirely recovered under local treatment, it is reasonable to suppose that all the ulcers were reached. There is no doubt, therefore, in my mind that the rectum and sigmoid flexure are involved in a large percentage of chronic cases.

DIAGNOSIS.

The diagnosis of amebic dysentery rests on finding in the stools or in the scrapings, living motile Amoeboe dysenterioe. Sometimes it requires several examinations before their presence can be established, but when once seen, in any considerable numbers along with the typical ulcers, the character of the disease is beyond doubt. This diagnosis will be more positive if the amebae are observed in the scrapings from the ulcer, rather than in the stools, for it is known that Amoeba coli may be present in the intestinal canals of perfectly healthy individuals. The simple presence, therefore, of one or two amebae is not sufficient, without the ulcers and typical symptoms, to justify the diagnosis of true amebic dysentery.

COMPLICATIONS.

The complications of amebic dysentery are physical exhaustion, anemia, autointoxication, peritoneal adhesions and abscess of the liver. The first two are not uniformly present: patients may suffer from the disease for a long time without emaciation or any great loss of strength. Some cases, however, become rapidly emaciated; the hemoglobin is greatly reduced and they are practically bedridden early in the disease. In all instances the patients have a feeling of lassitude and are just a little below par in strength. The color is usually sodden rather than pale, and there is often the hectic flush on the cheeks which suggests the possibility of tuberculosis.

These conditions are due to the autointoxication and drain on the system brought about by the presence of amebic ulcers in the intestine. When the ulcers have healed and the intestine is restored to its normal conditions, these symptoms rapidly disappear.

Abscess of the liver is the one complication which commands our highest respect and demands the most rapid eradication of the amebae. It is not my purpose to discuss here how these organisms reach the liver, whether through the portal circulation or across the peritoneal cavity; the fact remains that the large majority of cases of abscess of the liver are due to infection by Amoeba dysenteriae, and these have their habitat in the colon.

As Rogers states, no case of amebic abscess of the liver has ever been observed in which there were not present amebic ulcers in the colon. This fact justifies the statement that wherever the patient has symptoms of abscess of the liver or has suffered from it, he should be treated for amebic dysentery whether amebae are found in the stools or not. The fact that they are not found at the time of examination does not prove that the spores are not buried in the submucosa, lying dormant and ready to reproduce the disease at any time.

TREATMENT.

The treatment of amebic dysentery is based on two facts which have already been mentioned, viz.: The disease is due to an infection of the colon by Amaeba dysenteriae, and the seat of the infection is in the crypts of the mucus membrane or in the submucosa. Whether the original infection is due to the burying of the amebae themselves in these tissues or to the deposit of the spores it is impossible to state. From recent observations I am of the impression that the latter is more probable, but this is not important from a practical point of view. Our efforts should be directed toward getting rid of them and preventing their reproduction. In the beginning we may observe that there are usually no serious constitutional manifestations in this disease except when these are due to complications such as have been mentioned.

There is, therefore, no indication for serum therapy, as the disease is not in the blood and cannot be reached through that channel. The whole treatment should be directed toward the local lesions, the destruction of the amebae and the prevention of their development from the spores, and as these are buried in the tissues, it is evident that it will be impossible to destroy them by superficial washing or flushing of the intestinal canal, although this treatment is important and should be made use of to get rid of all the germs floating about in the colon. It is clear, however, that something should be employed by which the tissues may be penetrated and the germs or spores destroyed in order to completely eradicate the disease. While the remedies mentioned, bichlorid of mercury, nitrate of silver, saline solution, solutions of quinine, peroxid of hydrogen, etc., may be germicidal to the ameba when brought in direct contact with it, it is perfectly clear that none of these remedies will penetrate the submucosa.

This fact explains why so many cases treated by these remedies recur. The ideal treatment must, therefore, consist of some method by which these buried organisms can be reached and destroyed in situ. Early in our studies of Amaeba dysenteriae it was discovered that when the specimen stools on the slides on which they were being examined cooled off below a temperature of about 70 degrees F. the motility of the amebae was lost and could not be restored; this fact suggested that if the temperature of the parts containing these organisms could be reduced considerably below this degree the amebae could be destroyed and their infecting and reproductive powers would be eliminated. The application of cold to the intestinal mucous membrane through prolonged douches seemed to offer a solution of the question. At first such remedies as krameria, ichthyol, bichlorid of mercury and nitrate

of silver were introduced into the cold douches, but one after another was discarded, as it was found that simple cold water served every purpose in destroying the amebae.

When the bowel is tolerant of hydrogen peroxid 5 to 10 per cent. of this remedy in introduced into the water on account of its beneficial effect to the ulcers and to combat any mixed infections that may happen to be present.

In some patients it is necessary to use a long rectal tube in order to get the fluid high up in the colon, but in the majority of cases the simple rectal tip of a fountain syringe is sufficient. The patient is placed in the knee-chest posture, the bag or fountain being elevated not more than three feet above the level of the hips and the fluid is allowed to run in slowly. The amount of water used is limited only by the tolerance of the patient. Some take only a small quantity at first, but they soon learn to take even two or three quarts. Some can retain the water for only a few minutes, while others retain it for three-quarters of an hour. In the former class it is necessary to repeat the injections two or three times at each sitting in order to obtain the desired effect. The treatment is always begun by the administration of a large dose of sulphate of magnesium, and this is repeated once or twice every week, according to the necessity of the case. The time consumed in ridding the bowel of the amebae depends entirely on the tolerance of the intestine to cold water. In those cases in which large amounts of very cold water can be retained the organisms disappear in a very short time, while in those who can only retain small quantities for short periods several weeks are required.

In the chronic cases, where there is tenderness over the cecum and hepatic flexures, an icebag is applied over this region for two hours twice a day.

A metal glass reservoir is better than a fountain syringe for the injections because these vessels can be filled with cracked ice and the water kept very cold. The best results have been obtained in these cases in which the temperature of the water was below 45 degrees F.

Local ulcers of the rectum and sigmoid are treated by applications of antinosin, argyrol and other astringent and antiseptic substances. This local treatment is of the utmost importance and should never be neglected, as many of these ulcers are complicated by a mixed infection.

Internal medication is indicated where the digestion is impaired or where the patient needs stimulation on account of exhaustion. In

three instances the disease has been seated so high up in the colon and the patients have been so intolerant of cold water that it was impossible to reach the affected region in this manner and it became necessary to resort to surgical means in order to eradicate the amebae. In one instance the Gibson method of valvular colostomy was employed; in the other two the appendix was drawn up into the abdominal opening and sutured to the skin, after the method of Weir, until the peritoneal cavity had closed off; it was then amputated close to its base and there was thus left an opening through which a catheter could be introduced for irrigating the colon. In two of these cases the improvement was rapid and recovery complete. In the third case the patient developed miliary tuberculosis and died at the end of three weeks, the regular treatment having never been instituted. This case showed typical amebic ulcers above the ileocecal valve, thus indicating the possible advisability of making the opening in the ileum instead of the colon in such cases. At the same time recognizing the fact that the appendix may be the seat of amebic infection, it would be wise to remove this organ in all operative cases.

In seventy-three cases treated by these methods the results have been seventy cures, one death, one abscess of the liver, which eventually recovered, and one case called to Europe after two weeks' treatment. In five cases there were at times marked tenderness over the hepatic region and considerable rise in temperature, but these symptoms rapidly subsided with more frequent douching and the application of ice-bags over the catput coli and the hepatic region.

42 West Fiftieth Street.

DISCUSSION.

Dr. Fenton B. Turck, Chicago.—Dr. Tuttle called attention to the futile efforts to destroy the plasmodium; it is very interesting to see the efforts made to destroy them in some other way. It has been my experience that solutions have but little effect, and those that did had an effect on the circulation through the hyperemia that was produced by the drugs used. I have had a large experience in treating such infected cases while in the army. In the treatment I have tried oil, but the oil method has not been successful. It has shown some effect in that it produced a better physiologic activity in the colon. Oil may become a powerful irritant and so excite a hyperemia of the mucosa and thus produce some effect on the plasmodium. The method I now use is hot water. At the Pan-American Congress in 1895-96 I pre-

sented a contribution on the good effects of ice water, using hot water first. I found that if I used cold water first there was danger of collapse in weak patients. Therefore I have found more benefit from using a high temperature. A temperature of 115 F. is not sufficient to produce any effect on the micro-organisms; one should use a temperature of from 122 to 131 F. This can be done by gradually raising the temperature, starting with a temperature of 105 F. This heat has a very beneficial effect, seems to destroy the plasmodium, and after every treatment the amebae disappear. Then followed the use of ice water, and the effects produced are much better than if ice water be used alone. In very weak patients the effect of the heat followed by the ice is very beneficial.

In regard to this operation I have never experienced any difficulty in reaching the caput coli. The patient should be placed on an inclined plane and the tube should be introduced into the sigmoid and water run into the colon, let out again, reintroduced, and so one can douche the entire colon. When bismuth is used the x-ray will demonstrate the bismuth as high up as the transverse colon. There is no difficulty in the return of the water. Introduce a little air with the water; this increases the peristalsis and the fluid goes on. The vital condition of the patient should not be overlooked.

Dr. A. W. Warden, Weehawken, N. J.—The most successful experience I formerly had in the treatment of these cases of dysentery was by the use of ipecac or quinine, but recently I have used a remedy that I consider better. This drug is Chaparro amargoso, which to adults may be given in doses of from 2 to 4 grains of the extract or of 30 to 60 minims of the fluid extract every two hours during the day. In dysentery Chaparro amargoso seems to have a specific action by altering the secretions of the bowel in destroying the protozoa and in nullifying their power. It is also tonic, antiperiodic and astringent. Chaparro amargoso is also of value in the treatment of enterocolitis or summer diarrhoea of children, used in solution either alone or combined with opium.

Dr. Philip Marvel, Atlantic City.—One year ago in conversation with Dr. Tuttle about such a case he advised me to use ice water. I had been using different remedies, such as quinin, carbolic acid, nitrate of silver, argyol, peroxid of hydrogen, and others, with little or no effect in controlling the ulcerations. At Dr. Tuttle's suggestion, I tried ice water, and much to my satisfaction, the patient grew steadily better. It was my privilege to see her one week ago, and she was in very good

condition. I should like to ask Dr. Tuttle if he has observed contrac tures or strictures after the water treatment. The patient I refer to is now perfectly well except for a contracture in the rectum. Previously, Tuttle's proctoscope could be used, i. e., passed without pain, but now this is impossible; the stricture will only admit a medium large size old style Kelly's cystoscope.

Dr. Samuel S. Gant, New York.—Was not Dr. Weir the first to suggest this opening of the appendix and using it for irrigating the colon?

Dr. William Krauss, Memphis, Tenn.—In reference to the diagnosis of amebic dysentery, I think I am right in stating that I never made a diagnosis unless my microscope and the patient were in the room together. I have never been able to revive a motionless ameba. The mucus from the discharge or swabbing should be transferred quickly to a warm slide. I have tried Dr. Tuttle's suggestion of cold water and with success. Water cannot be used hot enough to injure the parasite.

Dr. Tuttle—As stated in the paper it was Dr. Wier who first suggested making use of the appendix for this purpose. I modified Dr. Wier's operation by drawing out the appendix and absolutely getting rid of it, at the same time obtaining access to the seat of the amebic infection. I omitted to speak of the mixed infections associated with dysentery of this type. I also wished to speak of the importance of the local treatment of ulcerations down in the rectum and in the sigmoid, when using cold water irrigations; and of hot water for improving the circulation. There are certain cases in which the ulcers become infected with a secondary infection, and they must be treated individually by local applications of tincture of iodin, etc. With regard to ipecac and quinine, how can they effect the buried amebae? The amebae are not in the blood, but in the sub-mucosa. The only way to reach them in this position is by the use of low temperatures. Dr. Morton of New York has recently reported a case in which the diagnosis of amebic dysentery was made and the case was treated by him by radiized quinin, and he claims the patient is well. Operation is to be resorted to only when all other methods of cure have failed. I do not believe it is a dangerous operation; it is certainly not more dangerous than leaving the amebae to progress to a chronic state, with its dangerous complications. There is little danger in pulling up the appendix and holding it there until adhesions form and shut off the peritoneal cavity, and then amputating it.— Journal A. M. A.

SCARLATINA INFECTIOUSNESS.

In spite of the most painstaking care, scarlet-fever convalescents not infrequently communicate the disease to others on their discharge from their physician's care or from the hospital. The cases of scarlet fever that develop under the circumstances are known in English literature as "return cases," which naturally have a most important bearing on the question of isolation of scarlatinal patients and the source of scarlatinal infection. During the recent years the supposed infectivity of the desquamating skin in scarlet fever has lost much in importance, and there are now experienced clinical observers who believe that the peeling scales are no more dangerous than the clothes and other articles that have come in contact with scarlatinal patients, i. e., that the skin per se is not infectious. Perhaps the main reason for this change in belief is the fact that desquamation appears to have no special relation to "return cases." In Aaser's series of 3,800 scarlet-fever patients, 79 in all likelihood were infected by discharged patients. We learn that in all these discharged convalescents desquamation had been completed for a week or more; that all were thoroughly disinfected before they were sent out; and, what is more important, that in about 80 per cent. there were present abnormal, principally inflammatory, conditions in the nasopharyngeal mucous membrane and in a considerable number in the ears. From his careful observations Aaser emphasizes that there is reason to believe that the virus of scarlet fever whatever its nature may be, attaches itself especially to the mucous membranes of the nose and throat, as well as of the middle ear, and that isolation of scarlet-fever convalescents should be maintained so long as any of these membranes present any signs of abnormal secretions. Furthermore, that desquamation in itself can be no reliable indication as regards contagiousness.

In England "return cases" have received much attention, and as a consequence the opinion is gaining ground rapidly that the infectivity of desquamation has been unduly emphasized. Indeed, so strong has this conviction grown that in some places radical modifications have been made in the methods of administration, and with interesting and

instructive results. Killick Millard discharged 190 cases before desquamation was completed; five of these cases became responsible for "return cases," but of these five four had nasal discharges and one an open sore behind the ear. In Southampton Lauder instituted a new system of isolation and discharge of the scarlatinal patients in the fever hospitals under his care during 1903. Stated briefly, the new system aims at protecting mild and convalescent cases by segregation from cases in the acute stages or complications. Indeed, all complicated cases are isolated. As a result of this innovation, Lauder believes that the number of severe, complicated and protracted cases has fallen off perceptibly. At the end of the third week cases free from complications are isolated in disinfected quarters, bathed frequently and given daily nasopharyneal douches, and then sent home at the end of the fourth week, regardless of the state of desquamation. Lauder compares the results for 1902 (old system) and 1903 (new system). In 1902 the average period of detention in hospital was forty-eight days, in 1903, thirty-four days—a reduction of fourteen days—but the number of "return cases" in each year is the same, namely, seven, and this works out in 1902 as 4.27 per cent., in 1903 as 2.15 per cent. on account of the greater number of cases discharged in 1903. Of 325 cases discharged in 1903, 33 were free from peeling and complications, and these caused no return cases; 204 were peeling without complications, and 2 caused return cases, and 88 were complicated cases, and of these 5 caused return cases. These last cases were detained in hospital an average of fifty days, while the average stay of the cases in the two first groups was nearly 20 days less. The 204 cases in the second group were returned to 1180 houses, containing 744 persons who had not had scarlet fever, 363 being under 15 years of age, but as "return cases," 2 could be traced only to two of these patients—and very careful attention seems to have been given this point—the infectivity of desquamation per se certainly must be very limited, to say the least. One of the two infecting cases developed a rhinitis on the eighth day after being discharged, and five days later a sister came down with scarlatina. All the five infecting complicated cases had had nasal or aural discharges before dismission from the hospital, and in some of them the

discharges reappeared a few days later. It will be remembered that in these five cases all peeling had ceased, and there seems to be no fault to find with the methods of disinfection of the patients or their clothes. Consequently, these cases furnish strong evidence of the infectiousness of discharges from nasopharynx and ears. Lauder suggests that the virus may linger in the tonsillar and other tissues even when it is difficult to detect any abnormal discharge, and Aaser recommends the use of hydrogen peroxid in nose and throat in order to detect minimal degrees of continuing pathologic secretion.

Hence the general import of these observations, and others with similar results which are now available, is that the dangers of desquamation have been exaggerated, that at least one very important source of scarlatinal virus is in nasopharyngeal and aural discharges of convalescents, and that important modifications are demanded in the usual routine methods in the hospital treatment of scarlet fever. Undoubtedly the new method inaugurated by Lauder will be continued by him, because the physicians in Southampton, who followed the departure with interest and presumably also, at least at first, with a reasonable amount of distrust, declared themselves as well satisfied with the results and reconciled to the idea of having peeling cases going about. In addition to its other and greater advantages, this shortening of the period of hospital treatment has the minor one of economy, which is effected when the number of days saved is reduced to the financial equivalent. The partial individual isolation advocated by Lauder has also much in its favor. Certainly the early removal of patients from such specially infected zones, as likely to develop in hospitals, especially when crowded, must tend to limit the chances for the transmission of infection and the development of complications. In scarlet fever each acute case is an active source of infection, primary as well a secondary. Is it not, therefore, rather singular that so little has been done to protect such patients from one another, the mild from the severe, the uncomplicated from the complicated? The logical thing to do is individual isolation until uncomplicated convalescence is well established.—Journal A. M. A., Ed.

Society Reports.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

STATED MEETING HELD OCTOBER 3, 1904.

The President, Dr. Daniel S. Dougherty, in the Chair.

HODGKIN'S DISEASE OR PSEUDOLEUKAEMIA.

Dr. W. G. Eckstein presented a case of Hodgkin's Disease or Pseudoleukaemia. The patient was a male, 22 years of age. Family history good, parents and brothers and sisters being alive. Childhood history is uneventful. The present trouble began twenty months ago with a slight swelling over the right side of the neck, and this swelling gradually increased in size. Shortly after the appearance of the swelling on the right side, a similar swelling developed on the left side of the neck. A diagnosis of pseudoleukaemia was made, and the patient was admitted to Mount Sinai Hospital and was treated with arsenic, but did not improve greatly. Applications of roentgen rays caused the tumors to diminish in size. Now, he presents a typical condition of Hodgkin's Disease from the standpoint of history and examination. He has enlarged glands of the neck and groins and slightly enlarged spleen, and has been subject to a series of recurrent paroxysmal attacks of fever which are characteristic of this condition. His blood has been examined several times, but with negative results.

Dr. A. Kohn opened the discussion of this case. He said that this patient's condition very markedly resembled sarcoma. In the speaker's opinion, it is possible, at the present time, to differentiate positively between Hodgkin's Disease, tuberculosis of glands and lympho-sarcoma. The patient under discussion has marked glandular enlargement of the spleen; but there is another class of cases that have neither of these

symptoms, and this class is the more important, because of the difficulty of diagnosis. This class of cases is also more prone to hemorrhage. A factor which has not yet been explained is why the internal enlargements should be more prone to hemorrhage than those enlargements that can be seen and felt. The symptoms of this class of cases are due to pressure: pressure upon the nerves, the blood-vessels and the breathing apparatus, and this may aid greatly in the diagnosis. The blood tests are negative unless a division is made on the basis of lymphocytes and multinuclear leukocytes; then the causes go over the border line to leukaemia, and in the speaker's opinion this is not justifiable. A piece of the gland may be excised for purposes of positive diagnosis, but, in the case of lymphosarcoma, for instance, this proceeding has been followed by a rapid spread of the disease. Treatment with arsenic has been followed with some degree of success, but treatment with the roentgen rays has been followed by some surprising results. The speaker recalled one patient who had submitted to this treatment for about five weeks, and his mass had shrunk most remarkably. Another patient had a mass on the left axilla which was treated with the rays, and it diminished in size very perceptibly. The treatment has not yet been given a sufficient trial to determine whether it affects the process of the disease other than by a shrinking of these masses.

Dr. Milton Franklin said a patient had been referred to him suffering from glandular enlargements, of which no definite diagnosis had been made. The speaker wished to use the roentgen rays, but when he explained to the patient that while the enlargements might diminish by shrinking, there might also be some sloughing, the patient refused to submit to any danger of the latter process. The high frequency current was used as a substitute for the rays, and the growths began to disappear very rapidly. The symptoms were in all respects those of patient's entire life-time, by all precedent he should have been dead. Hodgkin's Disease, and as the enlargements had been present during the He stopped coming for treatment, and the speaker did not know his condition at the present time.

Dr. B. H. Wells said that he had been acquainted for many years

with the patient to whom Dr. Franklin referred. When a young man someone had suggested that the enlargement of his glands might be due to syphilis, and he had accordingly been put on anti-syphilitic treatment for some time, but without result. The growth had diminished so remarkably under Dr. Franklin's treatment that the result was noticeable, even in his appearance on the street.

Dr. Eckstein, in closing the discussion, said that Dr. Flexner had described a cell inclusion found in two cases, which he thought explained the disease as being infectious. Undoubtedly the disease belongs to the class of infected granulomata. It is not difficult for the speaker to understand the good effects of the roentgen rays on the separate tumors, but he was unable to conceive of the X-ray benefiting the general process. In this case, even with the improvement shown, the speaker regarded the prognosis as bad.

POSTMORTEM SPECIMEN OF PUNCTURED INTESTINE.

Dr. J. A. Bodine showed a postmortem specimen of an intestine which had been completely cut in two by a wagon wheel passing over the abdomen. The patient came into the hospital stating that he was struck in the side by a moving wagon wheel. Examination of the abdomen superficially by the house surgeon showed no bruise, and as the patient had a normal temperature and normal pulse, without sign of a shock, he was permitted to go to bed with a seditive dose of medicine. During the night he arose and went to the toilet, returned to bed, and was dead in two hours. Subsequent investigation of the case developed the fact that the wagon wheel of a loaded furniture van passed directly across his abdomen at the level of the umbillicus, after which accident he walked to his home, some two blocks, and up two flights of stairs, said to his wife that he felt nauseated and decided to go to the hospital for treatment. He walked this distance, about half a mile, and walked up three flights of stairs to the ward. After examination by the house surgeon he was put to bed, and during the night arose as stated to go to the toilet, but whether the bowels moved or not, we are unable to state. After his return his collapse was so sudden, and his death followed so rapidly as to preclude the possibility of any surgery.

Dr. Kohn opened the discussion of this case. He said that he recalled a patient who had been kicked in the abdomen by a horse. The surgeon who examined him immediately afterwards said there was nothing but a contussion of the muscles. At seven o'clock the same evening, when first seen by the speaker, he looked ill, had an expression of pain, and looked as if he were suffering from some lesion. There was no temperature and the pulse was rapid (110) but on examining the abdomen there was a slight tenderness over the right iliac fossa, and on percussion an area of dullness extended around the edge of the right iliac fossa. A diagnosis of perforation of the gut was made and confirmed by Dr. Morris Manges, but the surgeon who had first seen the case claimed that the symptoms did not warrant this diagnosis. However, the patient was sent to the Presbyterian Hospital, where he was operated on at once, and an immense rent in the large intestine was sewed up, the patient recovering uneventfully.

Dr. Wells said that in his opinion an exploratory operation should be performed in all cases of crushing injury to the abdomen at the first sign of shock.

Dr. Hayes closed the discussion, saying that while he was House Surgeon at the New York Hospital, a patient was admitted who had a small stab wound below the border of the ribs, on the right hand side. There seemed to be no marked necessity for operation, but when an exploratory incision was made, it was found that the wound had penetrated the intestine.

OPEN OPERATION FOR CORRECTION OF DEFORMITY AND RESTORATION OF FUNCTION IN ANCIENT COLLE'S FRACTURE.

Dr. Bodine presented a nine-year-old boy on whom he had operated for Colle's fracture of two months' standing. Before the operation the patient had no abdunction, no adduction, hyperextension, flexion, pronation nor supernation at the wrist. There was a typical silver-fork deformity of an unreduced Colle's fracture. Operation was advised and performed. The speaker acknowledged thanks to Dr. Dawbarn for inspiration in this operation. It differed, however, in the site of the

incision, which was placed upon the dorsum of the wrist, instead of the radial side. The reason for this deviation from the original technique recommended by Dr. Dawbarn lies in the uncertainty of the radial nerve, which turns from the front of the arm to the dorsum somewhere along the lower third, but this is as definitely as it can be placed, and in the speaker's opinion there is less danger of wounding it if the course of the nerve is paralleled by the incision on the dorsum than in crossing the course of the nerve on the radial side of the bone. After driving a chisel into the site of the fracture and refracturing the bone, it is treated as a recent Colle's fracture. This case, which was operated upon five weeks ago, has every single wrist motion, the deformity being almost entirely gone. The speaker stated that he had now done nine cases with this method, with universally satisfactory results.

The second case exhibited was a man thirty years of age, with a typical Colle's fracture, as shown by the cast taken of the arm previous to the operation. The man had limitation of motion in all directions at the wrist joint. The unreduced fragment was chiseled free, and upon placing the hand in a straight line, so as to do away with its radial flexion, it was found that the gap was too wide, so the plan recommended by Dr. Dawbarn was followed, and half an inch was cut from the ulna midway between the wrist and elbow, thereby setting the whole hand back that distance. The wound closed, and after the usual treatment the patient recovered with perfect restoration of function and reduction of deformity.

As to the after-treatment, the pistol-shaped splint devised by Volkman, to be applied to the posterior surface of the arm was logical and to be recommended, but this splint is not always on hand when the surgeon is called to treat the lesion. A much simpler and more effective method was devised by the late Professor Van Arsdale, consisting of a straight piece of splinting material applied to the posterior aspect of the arm, a circular bandage starting from the thumb side and passing over the back of the arm, is carried down to the thenar eminence. It then passes between the front aspect of the projecting splint and the dorsum of the hand. This turn pulls the hand into a position of extreme abduction. In addition to this a piece of cotton is placed between the dorsum of the hand and the splint, forcing it into a position of flexion which does away almost entirely with pain. At the end of a week this splint is removed and replaced by a plaster of Paris barbarian splint moulded upon the posterior aspect of the arm, and held in place by a roller bandage. Daily massage and motion of wrist is given, and with this treatment we have succeeded in getting universally

good results in Colle's fractures. The common method of treating this lesion between two straight splints, one upon the front, and the other upon the posterior aspect of the forearm is illogical because a straight splint on the front of the arm cannot be made to make even a smooth pressure; again, a rigid splint upon the front of the arm causes oedema of the hand. If one will think of his anatomy, there is not a vein in the forearm sufficiently large to be dignified in anatomies by a name that does not lie just under the skin. Rigid pressure by a splint closes these veins, causing all the blood in the forearm to be returned through the deep vena comitus, causing passive aedema and effusion in the wrist and hand. As an bsolutely flexible rule, complete surgical anesthesia should be insisted upon to accomplish the reduction of the fracture.

Dr. Dawbarn said that he was proud of having been the originator of the operation advocated by Dr. Bodine for ancient Colle's fractures, and believed that it had a great future. In his first case he was much disappointed, as the gap produced by chisel at the point of fracture in the radius would not remain, and little by little the deformity was reproduced. In his second case he decided to divide the ulna at quite a high point, the higher the better as to appearance. In doing this he used a Gigli wire saw, and took a thin wedge out of the ulna and at once put it in the chisled gap in the radius to overcome the tendency to the lateral flexion or radial abduction of the wrist and hand, so characteristic of the badly set fracture—more strikingly characteristic than is the silver-fork deformity. The result was ideal, as the bone was rather cancellous and imbibed by capillarity enough nourishment to live well. The second case was a failure, and the bone thus transplanted died. In all subsequent cases, the speaker chiseled the piece taken from the ulna into small fragments—a dozen or less, and put them side by side in the radial gap; and there has been healing under Schede's moist blood-clot method—the vitalized plasma nourishing the bone chips. Sir William McEwen demonstrated, many years ago, that bone can survive without periosteum. In trephining, for example, following his early suggestion, the disc, in cases proper for its replacement, was put back upon the dura mater, and in a little over fifty per cent. of the cases it lives. The less compact it is—the more cancellous its diploe—the better are the chances that it will live; and lately, by chiselling the disc into small fragments, so that the capilliarity will not have so far to travel, the percentage of success is perhaps as high as ninety. Now, in regard to handling fresh cases, the incision in the radius, as referred to by Dr. Bodine, should be directed transversely against the point of the fracture; and when the skin incision corresponds, but is made in the long axis, and when low down on the forearm,

the latter does not threaten the radial nerve as much as when made higher, as by Dr. Bodine I have never cut it, although always on the qui vive as to an abnormality as to its course.

It should be a hard and fast rule never to attempt to reduce a Colle's fracture, except under general anesthesia, as no matter how brave a patient may be he will involuntarily stiffen his muscles and make difficult a reduction that would otherwise be very easy. Because of the rigidity of the dorsal tendons crossing the break, there will be tearing of their sheaths against the sharp, bony edges of the lower fragment; and hence a bad degree of tenosynovitis with stiff fingers, which condition might have been prevented by anesthesia. This, too, renders easy the rocking of the fragments, loosening and overcoming the impaction upon which the deformity depends. After the splint has been applied, make it a rule never to allow an hour to pass without having the fingers in motion. As to the splint, the speaker advocated plaster of Paris because most comfortable of all, but agreed with Dr. Bodine as to the position of the hand and wrist. Of course, a Bavarian splint, opening at one side is wisest, because of the early swelling. During massage, great care should be exercised not to move the fragments.

Dr. Bodine closed the discussion by saying that in his opinion plaster of Paris applied as a roller bandage was responsible for more loss of function than any other splint ever devised.

RADICAL OPERATION FOR HERNIA UNDER COCAINE ANESTHESIA.

Dr. Bodine showed three patients on whom he had performed radical operations for the cure of inguinal hernia under local anesthesia, and not a single patient had complained of pain. In a number of instances, where a double hernia existed, not a patient had refused to have the second side done after the first was completed. In all of these herniotomies, the amount of cocaine used was so small as to preclude the possibility of cocaine poisoning. The first case shown was a Frenchman who could not speak a word of English, and with the natural nervousness of a foreigner in a hospital, before a number of visiting doctors, it represented a severe test as to the painlessness of the method. He did not stir hand or foot or express pain during the operation. Great stress was laid upon the position of the incision, which was stopped short an inch above the corrugations of the scrotum. Had it been carried this additional inch, as recommended in text-books, it would have been im-

possible to do the operation under local anesthesia. From six to thirteen separate vessels would have been divided, and this would have represented thirteen distinct twinges of pain in the very beginning of the operation, and twenty-six more twinges of pain would have precluded the possibility of completing the operation under local cocaine anesthesia. The second patient was a fat man, a type of patient not particularly amenable to this type of cure, as the layer of fat between the skin and the exposure of the iliac inguinal nerve contains many nerve endings that cannot be satisfactorily cocainized. However, this patient is ready to state to you tonight that his operation was wholly without pain. The third case was a double hernia, the first side having been done two weeks ago, and the man now states his willingness to have the other side operated on. This is a good clinical proof that the method is without pain.

UNDESCENDED TESTES IN A CHILD.

Dr. D. A. Sinclair showed a case of undescended testes in a boy about twelve years of age. The left side was operated on in the early part of September, and the testicle brought down into the scrotum and anchored there. The boy also had a congenital hernia on this side, which was reduced, and the canal closed. The result of this anchoring of the testicle has been very satisfactory, and it is at present in its proper position in the scrotum.

A RARE BREAST CASE, ILLUSTRATING A TEACHING OF DR. SYME, OF SCOTLAND.

Dr Dawbarn presented a patient who had been referred to him with a diagnosis of cancer of the breast. There was a large, very hard mass, with small axillary glandular involvement, but not of cancerous nature evidently; and a typical history of cancer. The mass occupied the upper and outer quadrant mainly. Following the urgent teaching of Mr. Syme, the speaker made his first stroke straight through the centre of the hardest part of the growth, and a jet of pus spurted out, disclosing a pocket of perhaps a half ounce capacity. There was a very dense wall about this abscess, the better part of an inch in thickness. In other words here was a staphylococous infection, the explanation of which was that the vital cellular activity was not quite able to destroy the microbes, and the microbes were not quite virulent enough to spread, and the pus remained as a persistent, slight irritant, and simi-

lated a cancerous growth. A drainage tube was inserted, the wound healed rapidly, and the induraton has now almost subsided. This was the second case of the kind seen by the speaker, and he had heard of a third case in Mount Sinai Hospital, in which the House Surgeon removed a breast which was seemingly cancerous, only to discover by cutting the tumor open later that this condition of chronic abscess existed. A Polyclinic student asked whether, in cutting into the breast in this manner and leaving the lymphatics open, the danger of spreading the disease, had it been cancer, would not have been very great? Professor Dawbarn replied that had the operation for removal of the breast been postponed until some time later on, this danger would have existed; but if the first incision proved the diagnosis of cancer to be correct, the patient should be kept under the anesthetic, and the breast and axillary contents should be removed then and there. Cutting into a cancer, and then packing the cut with absorbent gauze and proceding to excise seemed to the speaker a less risk than an abscess found too late. Another point worthy of emphasis which formed the subject of one of the last papers of the younger Gross; also, a somewhat later one by Gerster, is that if operation for removal of the breast is begun by removing the breast and then clearing away the axillary contents, the operation is very apt, by involuntary massage, and by squeezing the breast, necessarily, while amputating it, to send the cancerous juices, (i. e., the lymph current with epithelial cells) into the circulation, and cancer may develop rapidly internally as a result thereof. This technique is always reversed by the speaker, and the operation begun by cutting the axillary lymphatics and removing the armpit glands and fat and cutting the breast last. This order of procedure adds neither to the length, gravity nor difficulty of the operation, and does away with all probability of sending the cancerous juices into the circulation. This point is far from being a trifling one. The speaker had often seen patients in whom the cancer reappeared so quickly inwardly—oftenest in the lungs—as to make the cause reasonably certain to him; but the profession as a whole have seemingly not learned of Dr. Gross' teaching.

The paper of the evening was read by Dr. Milton Franklin. The subject was

THE FINSEN METHOD.

He said in part, that the original Finsen lamp possessed many imperfections in principle and construction. The time necessary for the

treatments, and the amount of current consumed were large. From the first, there were efforts made to improve the apparatus and thus lessen the time and current consumed. Among the most important of the lamps offered for this purpose were those of Bang, Lortet, Genoud and Professor Pifford. The first made use of a small, iron arc of about three amperes capacity and placed at a few centimeters from the skin. The second consisted of an ordinary carbon arc of fifteen amperes capacity, placed near the skin and separated from it by a layer of water between two layers of rock crystal. The lamp of Piffard made use of a series of spark-gaps between small iron spheres and gave the best known ultra-violet spectrum. In all of these lamps a superficial cutaneous reaction could be obtained in less time than by the larger Finsen lamp, five minutes often sufficing with the last named.

In spite of all these improvements, the method had steadily lost favor, until, it has been abandoned in many places. The author, while abroad recently, made a study of the method in the Finsen institute, and comes to the conclusion that lost interest in the method is due to the efforts of ignorant experimenters to improve it. In many cases the apparatus was wholly inadequate and based on false physical assumptions. Also, many persons attempted to invade all fields of theapeutics with the light and failed, giving the impression that the method was not a success.

Finsen claimed for the method only that it would cure lupus vulgaris if properly applied and that the cosmetic effects would surpass those of any other known method. These claims were amply substantiated in the Finsen Institute and the method when kept within its proper sphere is a perfect success. Of the other lamps that have been tried, that of Piffard is the most successful and can be said to surpass that of Finsen in treating superficial conditions, such as lupus erythematosus.

Dr. D. J. McDonald asked whether there was not in use in this country a lamp of Prof. Piffard's that produced a deep burn. He also asked whether there was no way, other than using the arc lamp, to obtain the same amount of disbursement and the same quantity of the rays.

Dr. Franklin, in closing the discussion, said that it was impossible to get a deep burn with any lamp other than Prof. Finsen's, but some remarkable results in superficial cases had been produced by Prof. Piffard's lamp. He also said that it was absolutely necessary to use a large lamp.

Editorial.

JNO. C. LeGRANDE, M. D.,.....Editor and Prop

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The Opening Exercises of the Birmingham Medical College.

The eleventh annual session of the Birmingham Medical College began on Monday, Oct. 3, with a large attendance of students. The opening exercises were very interesting and instructive and were attended by a large number of the local members of the profession and other friends of the institution.

Dr. B. L. Wyman, the dean, welcomed the students in a brief address in which he gave them some good advice and explained the character and scope of the important work which they were about to undertake. He referred to the many important changes which had been

made in medical education in recent years. Among these changes he spoke of the lengthened course of instruction, the graded system, the requirements both for admission and graduation. He impressed upon the first and second course students the importance and necessity of gaining a thorough knowledge of the primary and fundamental branches as preliminary to beginning the study of the so-called practical branches taught during the third and fourth years. He referred to the growing importance of laboratory instruction as furnishing the only means by which the student could hope to become practically familiar with anatomy, physiology, histology, chemistry, pathology and bacteriology. He was sure the time had passed when a medical education consisted simply in listening to a course of didactic lectures. Without the accompanying laboratory work these were of comparatively little value.

To the students of the third and fourth years he emphasized the importance of clinical instruction and expressed the hope that they would take advantage of the excellent clinical facilities which were offered.

The regular opening address was delivered by Dr. J. T. Searcy, of Tuscaloosa, the distinguished superintendent of the Alabama Brice Insane Hospital. His subject was "The Psychology of Education." We wish that we could give our readers a complete outline of this most interesting address, but in a short editorial notice we can only make a few brief comments. The address was a true scientific exposition of the value of education in the development of the higher brain or psychic centers. He showed how individuals differed in their ability to acquire knowledge and also in their reasoning abilities and explained why some were very successful and others failed or reached only mediocrity. Success in life he thought was not dependent so much upon the school which the student attended as upon his ability to appropriate that which was useful. Progress and growth in knowledge and future success in life were in a large measure dependent upon the reasoning abilities, the prefrontal brain—abilities which enable the student to select and utilize what was of practical value. This he designated as pre-frontal sense. He was convinced that much which was taught in the schools was of no practical value, and thus it was a mistake to burden the student's mind with a mass of facts which could be of no use to him in after life. Referring to the reasoning abilities of women and her ability to acquire knowledge, he said that she need have no fears in competing with the sterner sex, as her pre-frontal sense was capable of as high a degree of development as that of man.

The address was replete with many valuable practical hints and suggestions in the various departments of education, and should be care-

fully read and studied by all those engaged in teaching. The faculty and students of the medical college are greatly indebted to Dr. Searcy for his very interesting and instructive address.

Letter from Dr. M. B. Cameron.

The following letter from Dr. M. B. Cameron, ex-president of the State Medical Association of Alabama, we publish in justice to him. In our editorial of July 1904, we endeavored to answer some statements of our friend, the editor of the Mobile Medical Journal, and if in doing so we placed Dr. Cameron in a wrong position it was not our intention to do so. We thank Dr. Cameron for calling our attention to the matter, and believe that his letter so clearly sets forth his position that we take the liberty of publishing it. We will publish his address in full in the November issue of the Journal.—Editor.

Dr. J. C. LeGrande, Birmingham, Ala.

Dear Doctor: Today my attention was called to the editorial in the July issue of the Alabama Medical Journal in reply to an editorial in the June issue of the Mobile Journal. The editorials in both Journals seem to be predicated on a small portion of a paragraph in my Presidential message, that appears to attribute to me opinions that I have never held, and to make recommendations to remedy evils that I never thought existed. If you had gone to the trouble to obtain a copy of my message, you would have readily seen that I defended our organization, and attempted to prove that such charges against our Association were entirely groundless. I send you a copy of my message so that you may see how you and Dr. Marechal have both (unintentionally I am sure) misrepresented me. The Mobile Medical Journal requested a copy of my message and obtained it, so I am at a loss to understand why it published only a small portion of that part of my message, viz: "There is a growing disposition among some of our members to criticize the method of conducting this Association, and their ground of complaint is, that it is too much a one man's organization, and too little time is devoted to purely medical matters."

I trust you will do me the justice to publish all that portion of my message that relates to that subject, so that I may not be placed in a false attitude towards our Association before your readers. I was prompted to write that part of my message by the receipt of letters from some prominent physicians over the State, who were dissatisfied with the plans of our organization, and I was under the impression that I was taking up the shield of defense of the Association rather than the sword of attack. Individually I think we have the most per-

fect Medical organization in the world, and the only recommendation I made in regard to any change of that kind was as to the manner of the appointment of the committee to select counsellors.

Further on in your editorial you say that my message is aimed at our State Health Officer. If the entire profession in the State could have had the same opportunity of knowing what confidence I have in the State Health Officer's ability, integrity, high devotion to duty, and his unselfish devotion to the interests of the Association, as I have given him opportunity to find out, I could have passed over that part of your editorial in silence. During my whole term as President our relations were extremely pleasant and cordial; and whenever the occasion arose when I thought I needed advice, I sought it unhesitatingly from him, freely obtained it, as it came seasoned with reason and based upon sound judgment. I have known our State Health Officer all my life, and I have never known anything small of him in all this time.

I am sorry that my attention was not attracted to this matter sooner, so that I might have earlier counteracted any false impressions that might have been created by the editorials in both of the Alabama Journals. Trusting you may do me the justice to place me in the proper position before your readers, I am, Yours fraternally,

M. B. Cameron.

Tennessee Valley Medical Association.

The meeting of the Tennessee Valley Medical Association closed its two days' meeting Thursday night, and adjourned to meet next time in Huntsville on the 14th and 15th of February next year. A very interesting time was had at the meeting and several prominent physicians were present.

The members were highly entertained by several useful papers being read by Dr. M. R. Moorman, of Huntsville; Dr. Hugh Boyd, of Scottsboro; Dr. B. W. Watson, Dr. W. M. Murray and Dr. Pettey of New Decatur. These were logically discussed by the members of the Association.

The following officers were elected for the ensuing term: Dr. Hugh Boyd, of Scottsboro, President; Dr. W. M. Murray, of New Decatur, First Vice-President; Dr. S. L. Rountree, of Hartselle, Second Vice-President; and Dr. M. R. Moorman, of Huntsville, Secretary and Treasurer.

Miscellaneous Notes.

It is announced that the Atlanta College of Physicians and Surgeons will erect a $100,000 college building.

We extend our sympathy to Dr. and Mrs. McAdory of this city, who are sorely bereaved on account of the death of their child.

A large number of the leading physicians of Birmingham have determined to establish a first-class library. This is a step in the right direction.

The Talladega County Medical Society held a very interesting and successful meeting during the month. Dr. Heacock of this city attended the meeting and read a paper.

The Fourth Pan-American Medical Congress, which was to have convened the latter part of December of this year at Panama, has been postponed until the first week in January.

Dr. W. H. Wilder, professor of Materia Medica and Therapeutics in the Birmingham Medical College, was recently elected one of the vice-presidents of the Tri-State Medical Association of Tennessee, Georgia and Alabama.

There are too many doctors in Alabama who fail to appreciate the real good to the profession and the benefits to themselves of contributing to a medical journal. They should take the time to write at least two or three papers for publication during each year.

From what I have used of Abbott's Saline Laxative I think it superior to any laxative I have ever tried and the more I use of it the better I like it and my patients say it is just splendid, claiming that it does not gripe and does its work without any annoyance or bad feeling.

Dr. H. W. C.

Young Doctor—Did you ever make a mistake in diagnosis?

Old Doctor—Yes. A shabby fellow came into my office one day and after I told him he had only a stomach-ache and charged him two dollars, I found out he was rich enough to have appendicitis.—Courier-Record of Medicine.

The Southern Surgical and Gynecological Society will meet in this city December 15th. The indications are that this meeting will be largely attended. On the second day of the meeting at 11 o'clock in the morning the unveiling of the statue of the lamented Dr. W. E. B. Davis will take place. This of itself will bring many distinguished and well known surgeons and physicians from the North and South. The profession of the city and county are already taking active steps in arranging for a large attendance and providing for the comfort and pleasure of all who come.

The only way to sustain and make a live, successful medical journal is for the doctors to subscribe and pay their subscriptions. This journal has a good list of subscribers who are neglecting to pay their subscriptions. This should not be so with this or any other medical journal. A local medical journal is helpful to every physician, and the expense and work required to run a journal are not known or appreciated by any one but he who "pushes the quill." We ask all who are delinquent to send us a check and thus lighten the burden.

The Royal Colleges of Physicians and Surgeons of Ireland have added Irish to the list of optional languages, one of which must be taken by each candidate at the preliminary examination held by the colleges. The following resolution, adopted at a recent meeting of the Kilkenny branch of the Gaelic League, makes the action of the college more obvious: "Resolved, That we will call on our elected representatives at the board of guardians to direct their empolyees to at once learn to speak the language of the Gael, and that Drs. Hackett and Morris write their prescriptions also in the Irish language under the pain of dismissal." Naturally the colleges did not want their future licentiates to be subject to instant dismissal for such gross ignorance.

The first International Congress on the Sanitation of the Dwelling-house, organized under the auspices of the French Society of Hygiene, will be held at Paris, October 15th to 20th, 1904, under the presidency of M. Janssen, member of the Institute. Among the honorary presidents, in addition to the leading hygienists of France, are the Prime Minister and the Ministers of Public Instruction, Agriculture, Commerce, and Marine. The object of the congress is to study the sanitary conditions of the building and installation of dwelling-houses, to urge the reforms in these conditions that appear to be required, and to discuss the practical means of inducing municipalities, owners, architects, engineers, builders and tenants to apply the principles of hygiene to the construction of dwelling-houses.

TUBERCULOSIS IN CHILDREN.

On November 6, 1902, Clifford Allbutt, in the course of an address on tuberculosis at Glasgow, referring to tuberculosis in childhood, said: "An opinion has been held by physicians at home and abroad, physicians of the highest authority, that in most cases, perhaps in all, it is during childhood that tubercle establishes itself in the human frame. This opinion I would not propose to you too confidently; yet, as a broad and effective aphorism, I believe it to be not unveracious, and if this be so, it points to a still more zealous care of our children. The passage of tubercle from parents to child is so rare as to be negligible; the disease is usually incurred during the years in which the child inhabits the floor, and inhales its dust. Again, the fungus may be taken in with the food, or by licking pencils and slates, by sucking dirty finger nails, and so forth." Although he had little hope of entirely preventing tuberculosis in childhood, at any rate for some time to come, the speaker thought that when the fact is taken into consideration that inoculation of it in early life may often be the origin and source of an outbreak many years later, no work can be more important than the provision of sanatoriums for delicate children. He suggests that large cities should erect by the sea-shore a group of cheap dwellings on the "cottage" system, to which should be sent children of consumptive tendencies.—Medical Record.

THE CLINICAL STUDY OF IDIOCY.

Pellizzi, (Journal of Mental Pathology) as a result of studies on the relation of clinical facts to anatomopathogenic findings, arrives at the following conclusions:

(1) Given a case of congenital idiocy which becomes apparent during early infancy and which does not present any acute manifestations, it is impossible to make a positive diagnosis regarding the true origin of the affection on the basis of clinical facts. (2) The idea, introduced by Koenig and Freud, calling for the restriction, on clinical principles, of the limits of the so-called common idiocy (degenerative, genetic, evolutive, biopathic) is erroneous. (3) Neuropsychopathic heredity is generally found in cases of cerebroplegias. (4) The duration depends on the nature and the gravity

of the lesions. The educability of these subjects also stands in relation to these conditions. (5) The dual forms of the idiocies as considered above must be taken broadly: It may be that developmental defects have their primary origin in pathological processes of the various cerebral zones; besides, the former may manifest themselves in a manner quite similar to that characteristic of pathological idiocies, as has been demonstrated in this paper.

A FRACTURE AND PARTIAL DISLOCATION IN THE CERVICAL SPINE.

Primrose, in the Canadian Practitioner and Review, reports a case in which the anterior horn of gray matter and the pyramidal tracts of the spinal cord were involved by the injury, but the sensory paths almost wholly escaped damage. The symptoms in the case were such as to indicate that the injury had involved the anterior half of the spinal cord. The patient, 14 years of age, was standing under a shed when the roof fell, pinning him down his neck flexed forward. When released it was found that he had lost power in the right leg and both arms. The left leg was also weak, but he could use it a little and was able to stand upon it. He had no sensation in either arms or legs. Twenty minutes later sensation began to return, and shortly was restored all over the body with the exception of the right arm, which did not regain sensibility until forty-eight hours after the accident. Two or three days after the accident he was able to walk, but his legs were stiff and his steps were short. About this time he was able to move the arms. After the accident there was some swelling of the neck, and any attempt to move the neck caused pain. Five weeks after the accident he could walk, though with difficulty. He could make his way slowly for about two hundred yards. While doing so he would support his chin with his hand so as to take the weight off his neck. He was able to use the left arm well and the right arm fairly well. Shortly after this he began to grow gradually worse, and lost the use of both arms and legs. Eight weeks after the accident he was unable to stand, and the arms were completely paralyzed. Sensation was not affected. An operation was performed, the exact nature of which is not stated, but it was followed by an improvement in motion and sensation. Later these were lost again.

Abstracts.

APPENDICITIS FROM THE STANDPOINT OF THE PHYSICIAN.

S. G. Bonney, Denver (Jour. A. M. A., July 9, 1904,) call attention:

First, to the supreme importance of early diagnosis, which, if obtained at once, affords a key for the satisfactory solution of the much-disputed problem as to the time of operation.

Second, in cases of longer duration, to the necessity of a most careful and detailed review of the previous manifestations, with a deliberate and well-considered differentiation of the several phases, to the end that a non-vacillating purpose may be evolved, subject only to the influence of such clinical developments as may obtain through intelligent observation.

It is insistently urged that a painstaking physical examination of the abdomen should be made in all cases of abdominal pain, regardless of the possible slight degree of severity of the pain, the presence or absence of chill, fever, nausea or vomiting. Not infrequently is a sharply localized area of resistance and tenderness found over the region of the appendix, without the other oft-associated symptoms of the disease. A diagnosis rendered possible at this time by a careful examination is of transcendent importance.

It is furthermore contended that the absence of definite physical signs in the right iliac fossa in the presence of sudden chill, fever, nausea, vomiting, acute general abdominal pain and prostration offers no reliable assurance of the non-existence of a most serious involvement of the appendix.

The contention is made that there is no constant definite relation between the severity of the symptoms, together with the abdominal signs, and the degree or nature of the actual pathologic change within the abdomen. There is no invariable rule by which to hazard an opinion on the existence of gangrene, perforation, abscess, circumscribing adhesions or localized peritoneal inflammation. The pathologic condition, without opening the abdomen, is at least a mere matter of conjecture even during convalescence or in the apparent absence of unfavorable symptoms.

It is obvious in the course of an acute appendical attack that the feeling of security engendered by the absence of distinctly unfavorable or alarming symptoms is often a most unsafe delusion. It goes without saying that no one can see into the abdominal cavity and describe

the pathologic process in the neighborhood of the appendix, or estimate with accuracy the imminence of threatening morbid change. One man's dictum is about as authoritative and worthy of credence as another's, other things being equal.

It is conceded that there are certain times and conditions when it is perhaps more conservative to delay operative interference, notably when the case is not seen until after the lapse of over thirty-six hours, and when at the same time there is an apparent remission of the acute symptoms and a more or less amelioration of the physical signs. Reference is here made to the diminution of pain, lowering of pulse and temperature, absence of vomiting or chill, lessening of distension, and perhaps passage of gas or fecal matter. At such a time it is fair to assume, provisionally, that adhesions are forming and that the inflamed area is being effectually walled off from the general peritoneal cavity, or that the inflammation itself has not yet penetrated the peritoneal covering. In the absence of a return of unfavorable symptoms, it should be recognized that there is perhaps less to gain and more to lose by a meddlesome interference at this particular period. To say the least, however, this time of observation, even at the best, is an anxious responsibility. Pending a recurrence of the previous acute symptoms or the development of other manifestations indicating an extension of the process, it is justifiable to refrain from surgical interference. Immediately, however, on the recurrence of pronounced chill or vomiting, with increased elevation of temperature or renewed abdominal pain, the indications for operation are imperative and brook no delay.

It is well to remember that in the event of an acute appendicitis, definitely and legitimately demanding an operation on its merits, few complicating conditions should furnish a contraindication. In such an emergency the consideration pertains solely to the choice of the lesser of two evils, and the mere existence of tuberculosis, kidney or heart lesions often affords insufficient grounds for hesitation or delay.

In all cases when operation is advocated it should be made clear, not that operation is absolutely necessary for recovery, but that the chances for recovery are greater with than without it. The existence of leucocytosis as offering indications for the necessity of operation is of comparatively minor importance.

In doubtful cases it must be emphasized that the dangers of operation per se are practically nil, and that the dangers of delay are terrible.